College for all Texans

Texas Higher Education Coordinating Board

Texas Public General Academic Institution Expenditure Study

FY 2007-FY 2009

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Division of Planning and Accountability
Finance and Resource Planning

Texas Higher Education Coordinating Board

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Mission of the Coordinating Board

The Texas Higher Education Coordinating Board's mission is to work with the Legislature, Governor, governing boards, higher education institutions and other entities to help Texas meet the goals of the state's higher education plan, Closing the Gaps by 2015, and thereby provide the people of Texas the widest access to higher education of the highest quality in the most efficient manner.

Philosophy of the Coordinating Board

The Texas Higher Education Coordinating Board will promote access to quality higher education across the state with the conviction that access without quality is mediocrity and that quality without access is unacceptable. The Board will be open, ethical, responsive, and committed to public service. The Board will approach its work with a sense of purpose and responsibility to the people of Texas and is committed to the best use of public monies. The Coordinating Board will engage in actions that add value to Texas and to higher education. The agency will avoid efforts that do not add value or that are duplicated by other entities.

The Texas Higher Education Coordinating Board does not discriminate on the basis of race, color, national origin, gender, religion, age or disability in employment or the provision of services.

TABLE OF CONTENTS

Executive Summary 1
Background 2
The Significance of the Matrix 2
Results of the Expenditure-Based Methodology 3
Budget-Neutral Analysis 4
Discipline Analysis, Expense per Semester Credit Hour by Institution 5
Total Full-Time Student Equivalent Comparison 5
Conclusion 6
Appendix 1 – Previous Instruction and Operations Matrix (FY 2010-FY 2011 Biennium) 7
Appendix 2 – Relative Weight History 8
Appendix 3 – Relative Weight Percent Change 10
Appendix 4 – FY 2007-FY 2009 Expense per Semester Credit Hour 12
Appendix 5 – FY 2007-FY 2009 Sum of All Expenditures at Public Universities 13
Appendix 6 – FY 2007-FY 2009 Semester Credit Hours at Public General Academic Institutions 14
Appendix 7 – FY 2007-FY 2009 Budget Neutral Analysis 15
Appendix 8 – Variance, FY 2007-FY 2009 Expenditure-Based to Current 16
Appendix 9 – FY 2009 Average Total Expense per Semester Credit Hour per Discipline 17
Appendix 10 – End Notes 19

LIST OF TABLES

Table 1 – Expenditure-Based Instruction and Operations Matrix, FY 2007-FY 2009 3
Table 2 – Cost per Semester Credit Hour by Level of Instruction 4
Table 3 – FY 2009 Expenditures per Full-Time Student Equivalent 6

Texas Public General Academic Institution

Expenditure Study for Fiscal Years 2007 through 2009

Executive Summary

The Texas public general academic institutions expenditure study draws on the "all funds" expense reported in the institutions' annual financial reports to produce a relative weight matrix used in calculating the Instruction and Operations (I&O) formula funding. Institutions continue to receive nearly 20 percent of their overall funding and 50 percent of their state funding through the I&O formula. Using this study's relative weights to formulate the 2010-2011 biennium funding would have resulted in a rate of $62.84 compared to the actual rate of $62.19; a change of 1 percent.

The matrix in this report is based on data from Fiscal Years (FY) 2007, 2008, and 2009. Institutions reported $17.3 billion in expenditures (a 7.5 percent increase) and 36.5 million semester credit hours (a 1.1 percent increase) for the three-year period. The relative weights show an overall 7 percent increase when compared to the last report, breaking the compression demonstrated in previous matrices. On average, the relative weights for individual disciplines and levels increased 5.7 relative weight points.

Compared to last year's report, six relative weights changed more than 10 percent. The greatest shifts include undergraduate lower-level pharmacy with an increase of 80 percent (0.71 to 1.27) and undergraduate lower-level vocational training with a decrease of 13 percent (1.66 to 1.44).

This report calculates expenditure-based relative weights for master's, doctoral, and special professional optometry (61.58, 80.02, and 4.66 respectively) to replace the previous weights (5.46, 19.12, and 7.00 respectively). The expenditure-based relative weights would reduce the University of Houston's allocation by 1 percent if adopted. Despite the sizable increase in master's and doctoral weights, the majority of the hours are reported in special professional.

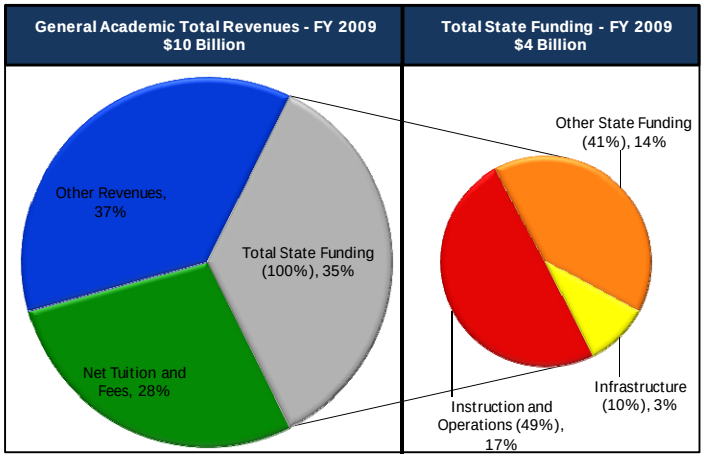
Discipline	Lower-Level	Upper-Level	Master's	Doctoral	Special Professional
Liberal Arts	1.00	1.70	4.07	9.26	
Science	1.74	2.95	8.07	20.30	
Fine Arts	1.40	2.31	5.44	7.07	
Teacher Education	1.41	1.73	2.34	7.58	
Agriculture	1.88	2.46	7.01	9.35	
Engineering	2.41	3.82	7.47	15.81	
Home Economics	1.04	1.68	2.88	6.97	
Law					3.92
Social Service	1.90	2.03	2.93	14.40	
Library Science	1.33	1.08	2.58	7.50	
Veterinary Medicine					15.05
Vocational Training	1.44	1.86			
Physical Training	1.35	1.20			
Health Services	1.23	1.89	3.23	9.14	2.42
Pharmacy	1.27	4.53	23.49	30.57	3.77
Business Administration	1.09	1.70	3.26	24.41	18.99
Optometry			61.58	80.02	4.66
Teacher Education-Practice	1.43	1.74			
Technology	1.96	2.42	4.07	2.95	
Nursing	1.96	2.35	4.45	9.94	

Background

In 2002, the General Academic Institution Formula Advisory Committee (GAFAC) developed a methodology to create an expenditure-based relative weights matrix for use in the I&O funding formula. This objective expenditure-based methodology uses the institution's three-year spending patterns to distribute I&O formula funds. This study includes all funds except Auxiliary Funds, which support activities not legally supported with state funds.

The Significance of the Matrix

State funding represented 35 percent of the universities' total revenues in FY 2009. The relative weights established in the expenditure study are a key driver to the I&O formula, which accounted for 49 percent of total state funding distributed to the universities and 17 percent of the universities' total revenues in FY 2009.



Parenthetical numbers represent the percent of total state funding as presented in THECB Sources and Uses (FY 2009).

The use of the matrix relative weights equally funds all institutions at the same rate for a semester credit hour (SCH) at a given level and discipline. The relative weights in the matrix represent the ratio of educational expenses to SCHs compared to undergraduate lower-level liberal arts. The matrix defines ratios for the 5 levels of instruction and 20 disciplines used in the I&O formula, which distributes funding by multiplying a rate ($62.19 for the 2010-2011 biennium) by the number of SCHs and relative weight for each level and discipline.

The relative weights calculation includes all funds, which reconcile to the institutions' Annual Financial Reports (AFRs). The study allocates these funds by the operating expense elements: instruction, research, academic and institutional support, and student services. Academic and institutional support and student services are allocate as reported in the AFRs. Instruction and research elements are combined and distributed between salaries and departmental operating expenses. These five expenditure elements, plus associated capital outlay from current funds, comprise the higher education expenses funded by the I&O formula, as it is defined in the General Appropriations Act.

The study allocates the NACUBO elements to levels of instruction and disciplines using the specific allocation methodologies for each category. Teaching salaries include the portion related to teaching and teaching assistant salaries. The methodology identifies faculty-teaching salaries using teaching load credits (TLC) reported on the class report (CBM004). The TLCs represent the portion of a faculty member's time spent teaching. The remainder of the salaries is categorized as departmental operating expense. Institutions complete surveys to report teaching assistant salaries.

Academic support expenses, which closely aligned with salaries, are allocated by level and discipline according to the percent distribution of faculty salary expenses. Institutional support and student services are allocated to the 5 levels using institution-specific headcounts and to the 20 disciplines by institution-specific SCHs. Departmental operating expenses (DOE) are allocated to the appropriate academic discipline and level based on the institutions' internal

budget designations. The five allocation categories are summed by discipline and level and divided by the corresponding statewide SCHs to create expense per SCH rates. These rates are divided by the undergraduate lower-level liberal arts rate to establish relative weights.

Results of the Expenditure-Based Methodology

The FY 2007-FY 2009 Expenditure Study relative weight matrix (Table 1) discontinued the trend of compressing weights when compared to the matrix used to calculate the 2010-2011 biennium formula (Appendix 1). While total expenditures and SCHs increased for this calculation, total expenditures increased at six times the rate of SCHs.[1] The sum of all relative weights reported this year increased 7 percent compared last year (367 to 395) (Appendix 2). Every relative weight in the matrix adjusted (Appendix 3) as the expense per SCH for undergraduate lower-level liberal arts increased 6.5 percent ($200 to $213) (Appendix 4). Following that trend, the average change to individual relative weights in the matrix was 5.7, a 3 percent increase compared to last year's 5.6. Additionally, the matrix varied more this year with a standard deviation of 6.4 relative weight points; a 4 percent increase when compared to 6.1 last year.

Table 1 – Expenditure-Based Instruction and Operations Matrix, FY 2007-FY 2009

Discipline	Lower-Level	Upper-Level	Master's	Doctoral	Special Professional
Liberal Arts	1.00	1.70	4.07	9.26	
Science	1.74	2.95	8.07	20.30	
Fine Arts	1.40	2.31	5.44	7.07	
Teacher Education	1.41	1.73	2.34	7.58	
Agriculture	1.88	2.46	7.01	9.35	
Engineering	2.41	3.82	7.47	15.81	
Home Economics	1.04	1.68	2.88	6.97	
Law					3.92
Social Service	1.90	2.03	2.93	14.40	
Library Science	1.33	1.08	2.58	7.50	
Veterinary Medicine					15.05
Vocational Training	1.44	1.86			
Physical Training	1.35	1.20			
Health Services	1.23	1.89	3.23	9.14	2.42
Pharmacy	1.27	4.53	23.49	30.57	3.77
Business Administration	1.09	1.70	3.26	24.41	18.99
Optometry			61.58	80.02	4.66
Teacher Education-Practice	1.43	1.74			
Technology	1.96	2.42	4.07	2.95	
Nursing	1.96	2.35	4.45	9.94	

Six relative weights fell well outside the average. The undergraduate lower-level pharmacy weight increased 80 percent (0.71 to 1.27) compared to the previous matrix. The drastic increase was due to two anomalies and if excluded the relative weight would have decreased 5 percent (0.66 and 0.63).[2] The relative weight for undergraduate lower-level vocational training decreased the greatest declining 13 percent (1.66 to 1.44). Excluding these two outliers, the relative weight would have increased 3 percent (1.44 to 1.48).[3] While these two weights represent the extreme changes, they are low in activity with less than 0.1 percent to the total SCHs included in the study and therefore have little effect on the allocation.

The remaining four notable increases range from 18 to 10 percent. The relative weight for master's pharmacy increased 18 percent (19.87 to 23.49). This weight would have increased 9 percent (21.46 to 23.48) had the single outlier driving the change been excluded.[4] The relative weight for undergraduate lower-level library science increased 17 percent (1.14 to 1.33). Excluding the two outliers in this category, the relative weight would have increased 5 percent (0.94 to 0.99).[5] The relative weight for undergraduate lower-level teacher education-practical increased 10 percent (1.30 to 1.40). Without the four anomalies, the relative weight would have declined 3 percent (1.00 to 0.97).[6] The relative weight for doctoral library science increased 13 percent (6.62 to 7.50). This program has experienced a steady increase in expenses with a decline in SCHs during the last five years.[7] The combined SCHs of the four mentioned weights are less the 0.075 percent of the study total making these large changes immaterial to the overall allocation.

The Legislative Budget Board allocates the optometry discipline's using Senator Ratliff's weights. Previous formula calculations have not used the expenditure-methodology relative weights to avoid any inequity associated with UH being the only Texas public institution with an optometry program.[8] The Formula Advisory Committee (FAC) did not recommended implementing the expenditure-based optometry weights as it would reduce funding for one institution and not significantly increase any others.[9] The staff agrees with the FAC; the sudden introduction optometry expenditure-based relative weights would not be the correct implementation. These weights should be phased-in over multiple biennia.[10] The staff will continue to publish the optometry expenditure-based relative weights availing the Legislature the option to use them.

Despite the six wide variations mentioned above, the remaining 63 relative weights did not significantly change from last year. This is evident from the macro perspective. While the formulas use discipline specific weights, calculating the weights by level (collapsing the expenditures and hours of all disciplines) indicates the change in expense the institutions experienced over the three-year period compared to the previous three-year period. Note the minor changes in relative weight compared to the increases in expense per SCH (Table 2).

Table 2 – Cost per Semester Credit Hour by Level of Instruction

Expense Per SCH	Lower-Level	Upper-Level	Master's	Doctoral	Special Professional
Current	$ 271	$ 447	$ 895	$ 2,788	$ 1,041
Previous	$ 253	$ 424	$ 860	$ 2,636	$ 945
Percent Change	7.2%	5.3%	4.0%	5.8%	10.2%
Relative Weight					
Current	1.27	2.10	4.20	13.09	4.89
Previous	1.27	2.12	4.30	13.18	4.73
Percent Change	0.6%	-1.2%	-2.3%	-0.7%	3.4%

Budget-Neutral Analysis

The budget-neutral analysis (Appendix 7) applies the current and previous relative weight matrix (Table 1 and Appendix 1) to FY 2009 SCHs adjusting the funding rate applied to the current matrix so the total amount funded equals that calculated using the previous biennium's funding rate and relative weight matrix. The difference in the two rates is the result of the changes in the relative weights (Appendix 8). The rate increased 1 percent ($62.19 to $62.84). Therefore, relative weights with 1 percent reductions would be offset by the increase in the rate, so that formula funding for that particular level and discipline would remain the same.

Discipline Analysis, Expense per Semester Credit Hour by Institution

The discipline analysis shown in Appendix 9, derived by reordering the FY 2009 expenditure study data by discipline and institution, illustrates the most and least efficient institutions by discipline with no regard to the level or quality of the instruction offered. TAMU-Kingsville held the three largest increases from the previous year's discipline analysis in the areas of agriculture, home economics, and vocational training.[11] Seven institutions reported in six disciplines in FY 2008 that did not report in those disciplines this year.[12]

Total Full-Time Student Equivalent Comparison

The total expenditure per FTSE analysis shows the total spent to support a FTSE in a given year by institution. Consider a FTSE to be 30 SCHs for undergraduate students, 24 for master's and special professional, and 18 for doctoral students.

UT-Austin spent the most at $1,343 million and TAMU-Texarkana spent the least at $16 million. Research-oriented institutions tend to run higher due to the amounts spent on research. In addition, institutions with low headcounts run at a higher rate due to lost economies of scale. Table 3 provides a comparison of total FTSEs, total expenditures, and the rate.

The overall expenditure per FTSE of $14,394 for FY 2009 is more than 5.5 percent compared to last year's $13,639. TAMU-Galveston, UT-Brownsville, North Texas, and Angelo were significant contributors to this growth. TAMU-Galveston's rate grew the most with an increase of 22 percent.[13] The rate at UT-Brownsville increased 11 percent.[14] The rate for North Texas increased 12 percent.[15] Finally, Angelo's rate increased 13 percent.[16]

Of the seven institutions with an absolute change twice the average (11 percent), UH-Victoria and Lamar are the only institutions whose rates decreased. Both institutions experienced significant increases in SCH generated without a corresponding growth in expenditures. Victoria's rate decreased 16.[17] The rate for Lamar decreased 12 percent.[18] When compared to their FY 2008 reports, 74 percent of the institutions changed less than 10 percent and 32 percent of the institutions changed less than 5 percent.

Table 3 – FY 2009 Expenditures per Full-Time Student Equivalent

Institution	FTSE	Expenditures (in Millions)	Expenditure per FTSE
UT-Arlington	19,949	$265	$13,260
UT-Austin	45,974	1,343	29,202
UT-Dallas	12,397	222	17,923
UT-El Paso	16,006	195	12,170
UT-Pan American	15,196	139	9,162
UT-Brownsville	3,393	54	15,895
UT-Permian Basin	2,649	28	10,442
UT-San Antonio	22,544	252	11,196
UT-Tyler	4,787	53	11,096
TAMU[1]	44,172	831	18,814
TAMU-Galveston	1,582	29	18,468
Prairie View	7,008	93	13,281
Tarleton	8,191	78	9,563
TAMU-Commerce	6,979	64	9,226
TAMU-CC	7,686	89	11,623
TAMU-Kingsville	5,911	80	13,607
TAMI	4,446	48	10,836
TAMU-Texarkana	1,162	16	13,575
WTAMU	6,131	61	9,911
UH	30,444	486	15,970
UH-Clear Lake	5,276	65	12,332
UH-Downtown	8,623	73	8,475
UH-Victoria	2,255	26	11,380
Midwestern	4,899	49	9,915
North Texas	29,308	317	10,801
SFA	10,797	103	9,517
TSU	7,711	115	14,932
TTU	26,200	373	14,219
Angelo	5,209	60	11,473
TWU	10,228	104	10,133
Lamar	11,955	98	8,163
Sam Houston	14,813	133	8,955
TxStU-SM	25,060	233	9,298
Sul Ross	2,167	32	14,926
Total/Total/Average	**431,107**	**$6,205**	**$14,394**

1. Excludes Research Foundation and Service Agencies.

Conclusion

The relative weights generated using data from FY 2007, 2008, and 2009 expenditures show continuing stabilization from the larger variations experienced during the initial data collection. While the average relative weight increased 5.7 percent, two-thirds of the relative weights showed a decrease compared to the previous study. The rates in this report will be used for the Board's initial I&O Formula Funding Recommendation for the 2012-2013 biennium to the Legislative Budget Board in the 82nd legislative session.

Appendix 1 – Previous Instruction and Operations Matrix (FY 2010-FY 2011 Biennium)

Discipline	Lower-Level	Upper-Level	Master's	Doctoral	Special Professional
Liberal Arts	1.00	1.72	4.18	9.29	
Science	1.71	2.97	8.09	20.52	
Fine Arts	1.39	2.32	5.43	7.19	
Teacher Education	1.42	1.74	2.48	7.64	
Agriculture	1.87	2.52	7.07	9.91	
Engineering	2.41	3.87	7.63	15.96	
Home Economics	1.06	1.70	2.86	6.62	
Law					3.86
Social Service	1.94	2.05	2.97	13.84	
Library Science	1.14	1.09	2.63	6.65	
Veterinary Medicine					16.53
Vocational Training	1.66	1.97			
Physical Training	1.29	1.28			
Health Services	1.24	1.98	3.21	8.49	8.49
Pharmacy	0.71	4.24	19.87	29.55	3.79
Business Administration	1.11	1.73	3.42	24.27	
Optometry		1190	68.58	76.92	4.51
Teacher Education-Practical	1.30	1.78			
Technology	1.90	2.38	4.41	3.37	
Nursing	1.94	2.45	4.73	10.64	

Appendix 2 – Relative Weight History

	2009	2008	2007	2006	2005	2004	2003	2002	2001
Undergraduate Lower-level									
Liberal Arts	1.70	1.72	1.72	1.71	1.70	1.77	1.79	1.81	1.91
Science	1.74	1.71	1.71	1.71	1.70	1.79	1.85	1.88	1.82
Fine Arts	1.40	1.39	1.38	1.38	1.37	1.41	1.45	1.43	1.39
Teacher Education	1.41	1.42	1.38	1.35	1.32	1.40	1.41	1.50	1.53
Agriculture	1.88	1.87	1.90	1.97	1.94	2.06	2.15	2.10	2.14
Engineering	2.41	2.41	2.36	2.27	2.23	1.85	1.78	1.79	1.70
Home Economics	1.04	1.06	1.07	1.04	1.02	1.06	1.08	1.12	0.96
Social Service	1.90	1.94	1.91	1.96	1.88	2.39	3.00	2.57	2.52
Library Science	1.33	1.14	1.01	1.03	1.19	1.12	1.24	1.08	1.05
Vocational Training	1.44	1.66	1.84	2.07	1.79	2.83	3.65	4.16	2.26
Physical Training	1.35	1.29	1.25	1.27	1.24	1.34	1.35	1.35	1.61
Health Services	1.23	1.24	1.31	1.31	1.34	1.32	1.32	1.37	1.51
Pharmacy	1.27	0.71	0.73	0.82	0.91	0.91	0.83	1.09	0.00
Business Administration	1.09	1.11	1.12	1.11	1.11	1.07	1.07	1.05	1.07
Teacher Education-Practical	1.43	1.30	1.13	0.96	0.88	1.08	1.42	1.11	1.53
Technology	1.96	1.90	1.88	1.81	1.90	1.87	1.97	1.95	1.86
Nursing	1.96	1.94	1.91	1.98	1.96	2.24	2.44	2.32	2.52
Undergraduate Upper-Level									
Liberal Arts	1.70	1.72	1.72	1.71	1.70	1.77	1.79	1.81	1.91
Science	2.95	2.97	2.97	2.92	2.89	3.01	3.16	3.15	3.20
Fine Arts	2.31	2.32	2.32	2.32	2.31	2.37	2.41	2.42	2.43
Teacher Education	1.73	1.74	1.73	1.74	1.71	1.86	1.93	1.96	2.03
Agriculture	2.46	2.52	2.64	2.69	2.65	2.70	2.82	2.66	3.26
Engineering	3.82	3.87	3.77	3.54	3.50	3.10	3.08	3.07	3.13
Home Economics	1.68	1.70	1.74	1.73	1.71	1.82	1.81	1.94	1.97
Social Service	2.03	2.05	2.05	2.18	2.11	2.76	4.37	2.91	2.95
Library Science	1.08	1.09	1.12	1.11	1.19	1.14	1.17	1.24	1.37
Vocational Training	1.86	1.97	2.12	2.31	1.99	2.45	2.75	1.95	2.36
Physical Training	1.20	1.28	1.50	1.55	1.87	1.25	1.20	1.22	1.35
Health Services	1.89	1.98	2.08	2.11	2.14	2.14	2.21	2.14	2.35
Pharmacy	4.53	4.24	3.62	3.53	3.12	3.32	3.22	3.44	0.00
Business Administration	1.70	1.73	1.74	1.72	1.73	1.63	1.64	1.63	1.71
Teacher Education-Practical	1.74	1.78	1.82	1.80	1.74	1.82	1.81	1.85	2.00
Technology	2.42	2.38	2.40	2.38	2.35	2.37	2.51	2.43	2.70
Nursing	2.35	2.45	2.52	2.55	2.61	2.66	2.63	2.84	2.98

	2009	2008	2007	2006	2005	2004	2003	2002	2001
Masters									
Liberal Arts	4.07	4.18	4.15	4.05	3.95	4.20	4.20	4.46	4.86
Science	8.07	8.09	7.76	7.36	6.87	8.08	8.88	8.98	9.54
Fine Arts	5.44	5.43	5.48	5.39	5.37	5.30	5.26	5.69	5.83
Teacher Education	2.34	2.48	2.56	2.51	2.49	2.55	2.57	2.71	2.71
Agriculture	7.01	7.07	7.20	7.25	7.40	7.63	8.75	7.15	8.23
Engineering	7.47	7.63	7.59	7.15	7.04	6.21	6.07	6.36	6.36
Home Economics	2.88	2.86	2.94	2.84	2.88	3.05	3.10	3.51	3.76
Social Service	2.93	2.97	3.00	3.09	3.09	3.37	3.40	3.55	3.62
Library Science	2.58	2.63	2.65	2.64	2.59	2.97	3.21	3.24	3.56
Health Services	3.23	3.21	3.32	3.40	3.45	3.70	3.97	3.69	3.56
Pharmacy	23.49	19.87	16.81	16.90	10.62	18.51	18.63	15.54	12.52
Business Administration	3.26	3.42	3.49	3.42	3.40	3.30	3.39	3.35	3.50
Optometry	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.46
Technology	4.07	4.41	4.81	4.60	4.48	4.57	4.55	5.22	6.59
Nursing	4.45	4.73	4.99	4.99	5.21	5.28	5.35	5.85	5.50
Doctoral									
Liberal Arts	9.26	9.29	9.31	9.26	9.03	9.74	9.93	10.18	11.53
Science	20.30	20.52	20.72	20.35	19.14	20.15	20.99	20.77	22.22
Fine Arts	7.07	7.19	7.32	7.23	7.19	7.16	7.20	7.66	8.66
Teacher Education	7.58	7.64	7.55	6.97	6.84	6.88	7.00	7.30	7.27
Agriculture	9.35	9.91	10.56	10.50	11.05	10.49	10.66	11.11	15.00
Engineering	15.81	15.96	16.16	15.65	15.18	15.30	15.70	16.30	17.78
Home Economics	6.97	6.62	6.41	5.89	5.98	6.15	6.11	7.38	8.57
Social Service	14.40	13.84	13.80	12.33	12.95	12.28	13.34	14.04	15.05
Library Science	7.50	6.65	6.32	6.17	6.28	5.44	5.49	5.46	4.67
Health Services	9.14	8.49	7.97	7.94	8.11	9.52	11.61	9.27	12.44
Pharmacy	30.57	29.55	29.37	27.39	26.32	26.34	28.67	24.54	22.52
Business Administration	24.41	24.27	22.73	20.83	19.36	19.26	19.50	18.31	22.86
Optometry	19.12	19.12	19.12	19.12	19.12	19.12	19.12	19.12	19.12
Technology	2.95								
Nursing	9.94	10.64	10.52	10.31	10.42	10.66	10.64	11.81	10.29
Special Professional									
Law	3.92	3.86	3.81	3.67	3.48	3.56	3.71	3.51	3.10
Veterinary Medicine	15.05	16.53	16.20	15.62	13.77	14.16	16.72	16.72	16.72
Health Services	2.42								
Pharmacy	3.77	3.79	3.84	3.85	3.69	3.74	4.01	3.62	3.18
Business Administration	18.99								
Optometry	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Relative Weights	**2009**	**2008**	**2007**	**2006**	**2005**	**2004**	**2003**	**2002**	**2001**
Total	395	367	363	353	340	355	373	365	377
Average	5.7	5.6	5.5	5.3	5.2	5.4	5.6	5.5	5.7
Standard Deviation	6.4	6.1	5.9	5.7	5.3	5.5	5.8	5.5	5.8

Appendix 3 – Relative Weight Percent Change

	2009	2008	2007	2006	2005	2004	2003	2002
Undergraduate Lower-level								
Science	2%	0%	0%	1%	-5%	-3%	-2%	3%
Fine Arts	1%	1%	0%	1%	-3%	-3%	2%	3%
Teacher Education	0%	3%	2%	2%	-5%	-1%	-6%	-2%
Agriculture	0%	-1%	-4%	2%	-6%	-4%	2%	-2%
Engineering	0%	2%	4%	2%	21%	4%	-1%	5%
Home Economics	-1%	-1%	3%	1%	-3%	-2%	-4%	17%
Social Service	-2%	1%	-3%	4%	-21%	-20%	16%	2%
Library Science	17%	12%	-2%	-13%	7%	-10%	14%	3%
Vocational Training	-13%	-9%	-11%	16%	-37%	-23%	-12%	84%
Physical Training	4%	3%	-1%	2%	-8%	0%	0%	-16%
Health Services	-1%	-5%	0%	-2%	2%	0%	-4%	-9%
Pharmacy	80%	-4%	-11%	-10%	1%	9%	-23%	N/A
Business Administration	-2%	0%	0%	1%	4%	0%	2%	-2%
Teacher Education-Practical	10%	16%	18%	8%	-18%	-24%	27%	-27%
Technology	3%	1%	4%	-4%	2%	-5%	1%	5%
Nursing	1%	2%	-3%	1%	-13%	-8%	5%	-8%
Undergraduate Upper-Level								
Liberal Arts	-1%	0%	0%	1%	-4%	-1%	-1%	-5%
Science	-1%	0%	2%	1%	-4%	-5%	0%	-2%
Fine Arts	0%	0%	0%	1%	-2%	-2%	0%	-1%
Teacher Education	-1%	0%	0%	2%	-8%	-4%	-1%	-3%
Agriculture	-2%	-5%	-2%	1%	-2%	-4%	6%	-19%
Engineering	-1%	3%	6%	1%	13%	1%	0%	-2%
Home Economics	-1%	-2%	0%	1%	-6%	1%	-7%	-2%
Social Service	-1%	0%	-6%	3%	-24%	-37%	50%	-1%
Library Science	-1%	-3%	1%	-7%	5%	-3%	-5%	-10%
Vocational Training	-6%	-7%	-8%	16%	-19%	-11%	41%	-17%
Physical Training	-6%	-15%	-3%	-17%	50%	4%	-2%	-9%
Health Services	-5%	-5%	-1%	-1%	0%	-3%	3%	-9%
Pharmacy	7%	17%	3%	13%	-6%	3%	-6%	N/A
Business Administration	-2%	0%	1%	-1%	6%	0%	0%	-5%
Teacher Education-Practical	-2%	-2%	1%	3%	-4%	0%	-2%	-7%
Technology	2%	-1%	1%	1%	-1%	-6%	3%	-10%
Nursing	-4%	-3%	-1%	-2%	-2%	1%	-7%	-5%

	2009	2008	2007	2006	2005	2004	2003	2002
Masters								
Liberal Arts	-3%	1%	2%	3%	-6%	0%	-6%	-8%
Science	0%	4%	5%	7%	-15%	-9%	-1%	-6%
Fine Arts	0%	-1%	2%	0%	1%	1%	-8%	-2%
Teacher Education	-6%	-3%	2%	1%	-2%	-1%	-5%	0%
Agriculture	-1%	-2%	-1%	-2%	-3%	-13%	22%	-13%
Engineering	-2%	1%	6%	1%	13%	2%	-5%	0%
Home Economics	1%	-3%	3%	-1%	-6%	-2%	-12%	-7%
Social Service	-1%	-1%	-3%	0%	-8%	-1%	-4%	-2%
Library Science	-2%	-1%	1%	2%	-13%	-7%	-1%	-9%
Health Services	1%	-3%	-2%	-1%	-7%	-7%	7%	4%
Pharmacy	18%	18%	-1%	59%	-43%	-1%	20%	24%
Business Administration	-5%	-2%	2%	1%	3%	-3%	1%	-4%
Optometry	0%	0%	0%	0%	0%	0%	0%	0%
Technology	-8%	-8%	4%	3%	-2%	1%	-13%	-21%
Nursing	-6%	-5%	0%	-4%	-1%	-1%	-8%	6%
Doctoral								
Liberal Arts	0%	0%	1%	3%	-7%	-2%	-2%	-12%
Science	-1%	-1%	2%	6%	-5%	-4%	1%	-7%
Fine Arts	-2%	-2%	1%	1%	0%	-1%	-6%	-12%
Teacher Education	-1%	1%	8%	2%	0%	-2%	-4%	1%
Agriculture	-6%	-6%	1%	-5%	5%	-2%	-4%	-26%
Engineering	-1%	-1%	3%	3%	-1%	-3%	-4%	-8%
Home Economics	5%	3%	9%	-2%	-3%	1%	-17%	-14%
Social Service	4%	0%	12%	-5%	5%	-8%	-5%	-7%
Library Science	13%	5%	3%	-2%	16%	-1%	1%	17%
Health Services	8%	6%	0%	-2%	-15%	-18%	25%	-25%
Pharmacy	3%	1%	7%	4%	0%	-8%	17%	9%
Business Administration	1%	7%	9%	8%	0%	-1%	7%	-20%
Optometry	0%	0%	0%	0%	0%	0%	0%	0%
Technology	N/A							
Nursing	-7%	1%	2%	-1%	-2%	0%	-10%	15%
Special Professional								
Law	1%	1%	4%	6%	-2%	-4%	6%	13%
Veterinary Medicine	-9%	2%	4%	13%	-3%	-15%	0%	0%
Health Services	N/A							
Pharmacy	-1%	-1%	0%	4%	-1%	-7%	11%	14%
Business Administration	N/A							
Optometry	0%	0%	0%	0%	0%	0%	0%	0%
Relative Weight Change	**2009**	**2008**	**2007**	**2006**	**2005**	**2004**	**2003**	**2002**
Total	7%	1%	3%	4%	-4%	-5%	2%	-3%
Average	3%	1%	3%	4%	-4%	-5%	2%	-3%
Standard Deviation	4%	3%	5%	7%	-4%	-5%	6%	-6%

Appendix 4 – FY 2007-FY 2009 Expense per Semester Credit Hour

Calculated weights are the resulting quotient of dividing the total expenditures by the total SCH, per level and discipline. These are not the same as relative weights.

Discipline	Lower-Level	Upper-Level	Master's	Doctoral	Special Professional
Liberal Arts	213	362	866	1,971	0
Science	370	627	1,718	4,323	0
Fine Arts	298	493	1,159	1,505	0
Teacher Education	299	368	499	1,615	0
Agriculture	401	525	1,493	1,991	0
Engineering	512	813	1,591	3,367	0
Home Economics	222	358	613	1,483	0
Law	0	0	0	0	835
Social Service	405	431	624	3,066	0
Library Science	283	229	548	1,596	0
Veterinary Science	0	0	0	0	3,205
Vocational Training	306	397	0	0	0
Physical Training	288	255	0	0	0
Health Services	262	402	688	1,947	515
Pharmacy	271	965	5,001	6,509	804
Business Administration	233	362	694	5,198	4,045
Optometry	0	0	13,114	17,040	993
Teacher Ed-Practice Teaching	304	372	0	0	0
Technology	418	515	866	629	0
Nursing	417	499	947	2,116	0

Appendix 5 – FY 2007-FY 2009 Sum of All Expenditures at Public Universities

Discipline	Lower-Level	Upper-Level	Master's	Doctoral	Special Professional
Liberal Arts	$2,097,752,909	$1,389,604,307	$632,017,907	$468,777,252	$262,072
Science	1,270,019,524	996,240,056	471,784,548	677,569,739	454,925
Fine Arts	404,790,998	316,757,840	119,771,774	55,190,981	-
Teacher Education	74,303,089	382,236,520	472,648,319	240,398,081	1,853
Agriculture	70,555,162	116,211,658	70,001,632	34,631,372	-
Engineering	402,753,560	782,897,986	837,972,374	640,313,258	-
Home Economics	68,154,316	92,927,923	26,527,436	18,727,128	-
Law	-	-	2,114,040	1,169	256,794,635
Social Service	15,029,473	45,981,782	74,872,619	18,678,794	-
Library Science	2,368,708	3,600,824	42,713,160	5,010,366	-
Veterinary Science	-	-	-	-	148,105,792
Vocational Training	5,232,121	3,657,334	9,733	-	-
Physical Training	69,245,988	2,783,689	20,682	-	-
Health Services	76,256,572	155,060,859	159,894,331	31,208,787	1,592,129
Pharmacy	692,331	6,867,683	30,008,514	29,621,282	113,683,664
Business Administration	243,752,648	1,060,829,358	579,260,796	184,878,487	97,072
Optometry	-	-	7,474,847	17,057,091	47,163,352
Teacher Ed-Practice Teaching	2,986,661	119,961,647	74,077	25	-
Technology	56,936,439	104,585,869	24,489,990	52,795	-
Nursing	26,641,467	204,532,314	79,952,014	17,734,101	-

Appendix 6 – FY 2007-FY 2009 Semester Credit Hours at Public General Academic Institutions

Discipline	Lower-Level	Upper-Level	Master's	Doctoral	Special Professional
Liberal Arts	9,851,059	3,839,104	730,090	237,837	-
Science	3,433,837	1,588,471	274,584	156,732	-
Fine Arts	1,359,710	642,993	103,358	36,665	-
Teacher Education	248,345	1,039,056	948,120	148,889	-
Agriculture	175,971	221,427	46,898	17,394	-
Engineering	785,897	963,126	526,793	190,195	-
Home Economics	306,818	259,666	43,257	12,626	-
Law	-	-	-	-	307,442
Social Service	37,088	106,599	120,017	6,092	-
Library Science	8,383	15,722	77,883	3,139	-
Veterinary Science	-	-	-	-	46,216
Vocational Training	17,109	9,219	-	-	-
Physical Training	240,526	10,908	-	-	-
Health Services	290,536	385,648	232,347	16,026	3,089
Pharmacy	2,555	7,115	6,000	4,551	141,427
Business Administration	1,047,935	2,929,387	834,696	35,566	24
Optometry	-	-	570	1,001	47,483
Teacher Ed-Practice Teaching	9,810	322,837	-	-	-
Technology	136,137	203,238	28,281	84	-
Nursing	63,917	409,556	84,399	8,380	-

Appendix 7 – FY 2007-FY 2009 Budget Neutral Analysis

Institutions (In millions)	FY 2010-2011 Matrix Weight @ $62.19 (FY 2009 SCH)	Annual Budget Neutral Rate $62.84 (FY 2009 SCH)	Annual Difference	Percent Change	System Impact
UT-Arlington	87.3	87.1	(0.2)	0%	0.68
UT-Austin	228.1	228.9	0.8	0%	
UT-Dallas	67.1	67.0	(0.1)	0%	
UT-El Paso	60.3	60.2	(0.0)	0%	
UT-Pan American	49.4	49.5	0.1	0%	
UT-Brownsville	11.7	11.7	(0.0)	0%	
UT-Permian Basin	8.9	8.9	(0.0)	0%	
UT-San Antonio	79.1	79.3	0.3	0%	
UT-Tyler	17.1	17.0	(0.1)	-1%	
TAMU	234.3	232.8	(1.5)	-1%	(2.11)
TAMU-Galveston	5.2	5.3	0.0	1%	
Prairie View	25.2	25.2	(0.1)	0%	
Tarleton	28.5	28.4	(0.1)	0%	
TAMU-Commerce	28.8	28.5	(0.3)	-1%	
TAMU-CC	27.8	27.7	(0.1)	0%	
TAMU-Kingsville	24.2	24.1	(0.1)	0%	
TAMI	14.4	14.4	(0.0)	0%	
TAMU-Texarkana	4.6	4.6	(0.1)	-1%	
WTAMU	20.6	20.6	(0.0)	0%	
UH	128.2	128.9	0.8	1%	0.39
UH-Clear Lake	25.8	25.6	(0.3)	-1%	
UH-Downtown	25.2	25.3	0.1	0%	
UH-Victoria	9.7	9.6	(0.2)	-2%	
Midwestern	15.1	15.0	(0.0)	0%	(0.03)
North Texas	106.0	106.3	0.3	0%	0.31
SFA	32.9	33.0	0.0	0%	0.05
TSU	27.6	28.0	0.4	1%	0.38
TTU	111.5	111.9	0.4	0%	0.52
Angelo	15.5	15.6	0.1	1%	
TWU	43.2	43.1	(0.2)	0%	(0.18)
Lamar	44.0	43.4	(0.6)	-1%	0.01
Sam Houston	46.6	46.7	0.1	0%	
TxStU-SM	80.6	81.1	0.5	1%	
Sul Ross	5.2	5.2	(0.0)	0%	
Sul Ross-Rio Grande	2.3	2.3	(0.0)	-1%	
Totals	**1,742.2**	**1,742.2**	**(0.0)**	**0%**	
Sum of All Reductions					(2.33)
Biennial Cost of Hold Harmless					(4.66)

SCHs and all funds (excluding auxiliary) are averaged for FY 2007, FY 2008, and FY 2009 to calculate the relative weights. The formula funding estimates above are calculated by multiplying the relative weights by the FY 2009 SCHs, the most recent data.

* These figures exclude Texas A&M University Research Foundation and service agencies.

Appendix 8 – Variance, FY 2007-FY 2009 Expenditure-Based to Current

Discipline	Lower-Level	Upper-Level	Master's	Doctoral	Special Professional
Liberal Arts	0%	-1%	-3%	0%	
Science	2%	-1%	0%	-1%	
Fine Arts	1%	0%	0%	-2%	
Teacher Education	-1%	-1%	-6%	-1%	
Agriculture	1%	-2%	-1%	-6%	
Engineering	0%	-1%	-2%	-1%	
Home Economics	-2%	-1%	1%	5%	
Law					2%
Social Service	-2%	-1%	-1%	4%	
Library Science	17%	-1%	-2%	13%	
Veterinary Medicine					-9%
Vocational Training	-13%	-6%			
Physical Training	5%	-6%			
Health Services	-1%	-5%	1%	8%	-71%
Pharmacy	79%	7%	18%	3%	-1%
Business Administration	-2%	-2%	-5%	1%	
Optometry		-100%	-10%	4%	3%
Teacher Education-Practice	10%	-2%			
Technology	3%	2%	-8%	-12%	
Nursing	1%	-4%	-6%	-7%	

Appendix 9 – FY 2009 Average Total Expense per Semester Credit Hour per Discipline

Institution	LA	SCI	FA	TE	AG	ENG	HE	LAW	SS
UT-Arlington	285	550	360	461	0	1234	214	0	465
UT-Austin	522	1794	758	1471	0	1986	501	1432	1178
UT-Dallas	441	588	316	249	0	1045	0	0	0
UT-El Paso	266	637	322	344	0	1199	0	0	400
UT-Pan American	251	305	282	459	0	568	366	0	475
UT-Brownsville	433	732	898	531	0	1372	644	0	841
UT-Permian Basin	292	388	450	448	0	721	290	0	541
UT-San Antonio	213	568	451	693	0	765	585	0	800
UT-Tyler	267	416	377	478	0	935	231	0	167
TAMU	420	806	244	861	532	1099	353	0	0
TAMU-Galveston	385	877	0	0	1252	1057	0	0	0
Prairie View	302	351	314	528	2689	826	356	0	851
Tarleton	239	338	319	382	815	386	235	0	317
TAMU-Commerce	290	312	470	350	419	403	185	0	366
TAMU-CC	281	589	364	534	766	555	234	0	387
TAMU-Kingsville	347	480	470	450	1128	601	1623	0	671
TAMI	329	370	446	392	0	626	274	0	697
TAMU-Texarkana	419	641	365	543	0	1231	666	0	0
WTAMU	232	271	559	333	436	595	562	0	229
UH	371	652	555	568	0	1426	304	595	642
UH-Clear Lake	377	476	380	402	986	708	378	0	388
UH-Downtown	255	356	246	327	0	436	246	0	209
UH-Victoria	373	404	0	403	0	459	247	0	0
Midwestern	251	284	459	480	0	535	237	0	427
North Texas	287	495	506	456	0	713	185	0	212
SFA	225	332	380	417	1010	684	224	0	477
TSU	373	499	435	785	0	1089	385	726	444
TTU	352	541	472	543	1063	784	428	679	508
Angelo	374	389	441	338	303	514	347	0	348
TWU	247	324	441	424	369	376	394	0	463
Lamar	258	332	367	213	0	545	353	0	442
Sam Houston	277	277	381	369	324	508	264	0	0
TxStU-SM	279	315	354	366	435	495	341	0	429
Sul Ross	417	776	581	522	771	322	0	0	866
Total	**330**	**673**	**446**	**504**	**695**	**1139**	**354**	**937**	**601**
Average (Excluding zeros)	321	514	430	489	831	788	388	858	509
High	522	1794	898	1471	2689	1986	1623	1432	1178
Low (Excluding zeros)	213	271	244	213	303	322	185	595	167
Median (Excluding zeros)	291	446	408	450	769	696	344	702	453

Institution	LS	VT	PT	HS	PH	BA	OPT	TEP	TEC	NUR
UT-Arlington	0	278	754	276	0	340	0	211	485	437
UT-Austin	762	0	0	997	1456	870	0	1130	314	1175
UT-Dallas	0	0	152	1103	0	787	0	323	0	0
UT-El Paso	0	0	175	902	0	363	0	118	222	418
UT-Pan American	249	0	218	381	0	378	0	333	520	544
UT-Brownsville	0	0	748	634	0	473	0	540	776	1149
UT-Permian Basin	683	826	327	472	0	372	0	1094	656	0
UT-San Antonio	0	236	181	351	0	376	0	251	758	0
UT-Tyler	0	0	0	438	0	267	0	270	507	508
TAMU	0	0	330	379	0	529	0	319	609	0
TAMU-Galveston	648	662	532	342	0	452	0	0	709	0
Prairie View	0	0	451	409	0	502	0	655	592	677
Tarleton	0	271	226	471	335	260	0	374	344	568
TAMU-Commerce	222	266	298	204	0	344	0	313	499	0
TAMU-CC	0	0	0	332	0	398	0	471	579	461
TAMU-Kingsville	0	1036	355	485	0	439	0	484	489	0
TAMI	0	0	351	366	0	439	0	341	971	488
TAMU-Texarkana	0	0	0	603	0	413	0	461	205	754
WTAMU	1286	0	390	636	0	375	0	282	462	701
UH	0	343	378	368	1487	403	1634	462	499	0
UH-Clear Lake	366	0	0	421	0	527	0	121	515	0
UH-Downtown	0	0	0	0	0	274	0	378	712	0
UH-Victoria	0	0	0	0	0	443	0	323	631	552
Midwestern	0	319	353	452	0	344	0	324	1406	452
North Texas	514	229	481	371	0	370	0	461	819	0
SFA	0	368	218	343	0	305	0	543	674	600
TSU	0	951	269	560	738	652	0	1015	1226	0
TTU	946	0	430	568	0	507	0	453	552	0
Angelo	0	0	485	417	0	372	0	314	363	591
TWU	387	0	422	489	0	261	0	342	539	544
Lamar	405	382	270	340	0	296	0	257	288	590
Sam Houston	478	141	191	282	0	321	0	317	504	0
TxStU-SM	0	0	262	455	0	309	0	372	396	0
Sul Ross	0	813	611	411	0	503	0	590	593	1091
Total	**550**	**367**	**315**	**475**	**1259**	**445**	**1634**	**378**	**556**	**583**
Average (Excluding zeros)	579	475	365	477	1004	419	1634	432	588	647
High	1286	1036	754	1103	1487	870	1634	1130	1406	1175
Low (Excluding zeros)	222	141	152	204	335	260	1634	118	205	418
Median (Excluding zeros)	496	343	351	419	1097	377	1634	342	539	568

Appendix 10 – End Notes

[1] The three-year total expenditures used to calculate this year's matrix increased 7.5 percent, while the three-year SCHs increased 1.1 percent. The $17.3 billion total expenditures and 36.5 million SCHs were used to calculate the expenditure-based matrix (Appendix 5 and 6). The total expenditures in the previous study totaled $16.1 billion (6.8 percent less than this matrix) with 36.1 million SCHs (1.1 percent less than this matrix).

[2] Undergraduate lower-level pharmacy expense per SCH increased 250 percent from FY 2006 to FY 2009. UH and Texas Southern drove the elevation running at $1,971 and $20,000 per SCH in FY 2009. The institutions did not report a program at this level in FY 2006. UH's program is on its third year and now allocating at a much lower rate than the first two presented. This is an indication that following expenditure studies will produce a lower relative weight. UT-Austin has maintained a rate between $133 and $142 per SCH and contributed more than 90 percent of the activity.

Pharmacy - Undergraduate Lower-Level				
SCH	**2006**	**2009**	**Change**	**PCT**
UT-Austin	792	909	117	15%
UH	-	91		
TSU	-	8		
Total	792	1,008	216	27%
Expense	**2006**	**2009**	**Change**	**PCT**
UT-Austin	$ 105,196	$ 128,843	$ 23,646	22%
UH	-	179,334		
TSU	-	159,749		
Total	105,196	467,925	362,729	345%
Expense Per SCH	**2006**	**2009**	**Change**	**PCT**
UT-Austin	$ 133	$ 142	$ 9	7%
UH		1,971		
TSU		19,969		
Total	133	464	331	249%

[3] UH and Sul Ross (Rio Grande included) reported high rates in FY 2006 for undergraduate lower-level vocational training, which fell out of scope for this year's study. The overall expense per SCH for FY 2006 was $429. By excluding UH and Sul Ross from the study, who reported $2,291 and $3,388 respectively, the rate would have been $285 per SCH and comparable to the $379 rate reported in FY 2007.

Vocational Training - Undergraduate Lower-Level				
SCH	**2006**	**2009**	**Change**	**PCT**
UH	66	1,110	1,044	1582%
Midwestern	618	1,902	1,284	208%
Sul Ross	143	114	(29)	-20%
Total	4,006	5,039	(450)	-11%
Expense	**2006**	**2009**	**Change**	**PCT**
UH	151,232	384,407	233,175	61%
Midwestern	116,696	607,245	490,549	81%
Sul Ross	484,427	91,787	(392,640)	-428%
Total	1,717,463	1,606,839	(110,625)	-6%
Expense Per SCH	**2006**	**2009**	**Change**	**PCT**
UH	2,291	346	(1,945)	-562%
Midwestern	189	319	130	41%
Sul Ross	3,388	805	(2,582)	-321%
Total	429	319	(110)	-26%

[4] The change in master's pharmacy relative weight is driven a 98 percent increase in expense per SCH between FY 2006 and FY 2009. UT-Austin and TSU experienced slight declines in SCH and 30 to 50 percent increases in expense. The overall expense increased 108 percent with only a 5 percent change in SCHs. Texas Woman's demonstrated a low rate FY 2006. This was the institution's last reporting in this category and it falls out of scope for the current study. The institution supported 486 SCHs with $171,000, a rate of $354. This program runs at a rate of $898 to $7,773, with UT-Austin taking the lead in FY 2009 and Texas Southern being the most efficient in FY 2007. UH is the largest participant in this category contributing 60 percent of the SCHs and 67 percent of the total expenditures.

Pharmacy - Master's				
SCH	**2006**	**2009**	**Change**	**PCT**
UT-Austin	509	497	(12)	-2%
UH	569	1,204	635	112%
TSU	390	351	(39)	-10%
TWU	486			
Total	1,954	2,052	98	5%
Expense	**2006**	**2009**	**Change**	**PCT**
UT-Austin	$ 2,653,028	$ 3,862,947	$ 1,209,919	46%
UH	2,861,671	8,278,316	5,416,644	189%
TSU	439,245	576,888	137,643	31%
TWU	171,972			
Total	6,125,917	12,718,151	6,592,234	108%
Expense Per SCH	**2006**	**2009**	**Change**	**PCT**
UT-Austin	$ 5,212	$ 7,773	$ 2,560	49%
UH	5,029	6,876	1,846	37%
TSU	1,126	1,644	517	46%
TWU	354			
Total	3,135	6,198	3,063	98%

[5] Comparing the year falling out of scope (FY 2006) to the year coming in (FY 2009) for undergraduate lower-level library science, the overall expense per SCH doubled. Texas Tech contributed to the rate increase by doubling its rate between periods. In FY 2009, the institution's discipline ran at $1,093, which is more than three times the total rate. Texas Tech's contributed 43 percent of the total allocated expenses. Lamar additionally contributed to the weight increase, but to a lesser degree with a FY 2009 rate 8 times that of FY 2006. While the institution's rate increased so dramatically, the change was less impactful as they contributed only 5 percent of the total allocated expense. Texas Woman's mitigated Texas Tech and Lamar's increases by cutting its rate by 28 percent. This was accomplished by shedding expenses faster than credit hours. UT-Austin generates 50 percent of the expense and 25 percent of the SCH for a rate of $204. If the outliers had been excluded from the studies, the relative weight would have been 0.89 last year and 0.94 this year, a 6 percent increase.

Library Science - Undergraduate Lower-Level				
SCH	**2006**	**2009**	**Change**	**PCT**
UT-Austin	1,802	1,926	124	6%
Texas Tech	319	335	16	5%
Lamar	135	107	(28)	-21%
TWU	184	99	(85)	-46%
Total	2,993	2,543	(450)	-15%
Expense	**2006**	**2009**	**Change**	**PCT**
UT-Austin	$ 264,263	$ 393,215	$ 128,952	33%
Texas Tech	131,022	366,277	235,255	180%
Lamar	6,811	43,375	36,563	537%
TWU	30,834	11,969	(18,865)	-61%
Total	$ 484,590	$ 843,961	$ 359,371	74%
Expense Per SCH	**2006**	**2009**	**Change**	**PCT**
UT-Austin	$ 147	$ 204	$ 58	39%
Texas Tech	411	1,093	683	166%
Lamar	50	405	355	703%
TWU	168	121	(47)	-28%
Total	$ 162	$ 332	$ 170	105%

[6] The increase in undergraduate lower-level teacher education-practical was due to overall allocated expense increasing 52 percent while overall SCHs decreasing 13 percent in FY 2009 when compared to FY 2006. The overall expense per SCH increased 65 percent ($209 to $346). This growth was due to a jump in expenses at UH. In FY 2009, UH reported 36 percent of the expenses in the category with only 6 percent of the SCHs. The chart below denotes several additional above average rates.

Teacher Education-Practical - Undergraduate Lower-Level

SCH	2006	2009	Change	PCT
UT-Brownsville	96	93	(3)	-3%
TAMU-Kingsville	60	57	(3)	-5%
UH	6	188	182	3033%
UH-Downtown	12	24	12	100%
SFA	207	189	(18)	-9%
Sul Ross	36	72	36	100%
Total	3,362	3,083	(450)	-13%
Expense	**2006**	**2009**	**Change**	**PCT**
UT-Brownsville	44,618	52,744	8,127	15%
TAMU-Kingsville	28,919	38,824	9,905	26%
UH	3,092	380,156	377,063	99%
SFA	75,772	90,214	14,442	16%
Sul Ross	9,911	36,378	26,467	73%
Total	703,220	1,067,058	363,838	52%
Expense Per SCH	**2006**	**2009**	**Change**	**PCT**
UT-Brownsville	465	567	102	18%
TAMU-Kingsville	482	681	199	29%
UH	515	2,022	1,507	75%
UH-Downtown	403	554	151	27%
SFA	366	477	111	23%
Sul Ross	275	505	230	46%
Total	209	346	137	65%

[7] The doctoral library science rate increased 62 percent in FY 2009 when compared to FY 2006. Driven by 58 percent rate increases from North Texas and Texas Woman's. The institutions' SCH activity dropped faster than expenses as shown in the chart below.

Library Science - Doctoral				
SCH	**2006**	**2009**	**Change**	**PCT**
UT-Austin	475	455	(20)	-4%
UNT	541	315	(226)	-42%
TWU	572	270	(302)	-53%
Total	1,588	1,040	(548)	-35%
Expense	**2006**	**2009**	**Change**	**PCT**
UT-Austin	$ 1,273,071	$ 1,508,567	$ 235,495	18%
UNT	360,952	331,954	(28,998)	-8%
TWU	354,665	264,688	(89,976)	-25%
Total	1,988,687	2,105,209	116,521	6%
Expense Per SCH	**2006**	**2009**	**Change**	**PCT**
UT-Austin	$ 2,680	$ 3,316	$ 635	24%
UNT	667	1,054	387	58%
TWU	620	980	360	58%
Total	1,252	2,024	772	62%

[8] The staff unsuccessfully attempted to collect optometry expenditure data from other state's public institutions to satisfy the requests of two FACs. The other states' do not collect expenditure data in alignment with the expenditure study requirements. The 2012-2013 biennium FAC was charged with making recommendations on how to manage relative weight calculations when fewer than three institutions offered programs. The committee recommended using expenditure-based relative weights in these situations and allowing weights to populate naturally.

[9] Intuitively, it was assumed UH would gain funding as the relative weights for master's and doctoral go from 5.46 and 19.12 to 61.58 and 80.02 respectively, however these levels of instruction for the program are quite low. Most of the program's activity is at the special professional level where the relative weight published in this study is 4.66 versus the 7.00 Senator Ratliff weight.

[10] The use of expenditure-based relative weights is the most equitable means of weighing SCHs for use in the I&O formula. While UH is a single contributor to these matrix cells, the use of expenditure data is more relevant than any other methodology. The relative weights would be determined by historical spend. Hypothetically, the institution could work to spend more in this area to increase its share of the formula funding, but its efforts would be mitigated by the study's three-year averaging of expenses. Additionally, the relative weight generated in this study would be

adjusted by a changing undergraduate lower-level liberal arts rate, which is outside of the institution's direct control.

[11] TAMU-Kingsville's agriculture program expense per SCH increased 126 percent ($499 to $1,128) between FY 2008 and 2009 due to a 7 percent increase in SCHs and a 141 percent increase in expenditures. The program expense went from an allocated $3 million in FY 2008 to $7 million in FY 2009. The majority of the allocation increase occurred at the undergraduate levels. Despite this institution's large increase in expense per SCH, the relative weights were not affected as the individual weights demonstrated a decline during the previous expenditure study. All institutions combined allocated more than $107 million for this discipline with reported SCHs of 154,000. While increasing SCHs by 11 percent, the institution's home economics rate increased 257 percent ($454 to $1,623). The institution allocated $3.2 million to home economics in FY 2009, 300 percent more than the $800,000 allocated in FY 2008. Again, the majority of the allocation increase occurred in the undergraduate levels. Notably the relative weights for undergraduate lower-level home economics decreased in comparison to the last expenditure study. This institution has a minor contribution to the overall activity and allocation of home economics (2,100 to the overall 200,000 SCHs and $3 million to the overall $71 million allocation). The institution's vocational training program experienced a 161 percent increase in rate ($397 to $1,036). This was due to a 26 percent decline in SCHs coupled with a 93 percent increase in allocated expenditure. The program's activity history is sporadic with year-over-year increases and decrease during the last decade. Despite the radical change for this institution, the relative weights for vocational training for all institutions decreased from the previous reporting.

[12] UT-Arlington had provided a low SCH master's level agriculture program since the fall of 2003. As of this last fall, the institution stopped reporting hours in the program. The program has no history of a spring demand. UT-San Antonio has a trend of intermittent master's level demand for an agriculture program dating back to fall 2000. In spring 2008, the institution reported 24 SCHs in the discipline, but reported no activity as of fall 2008. UT-San Antonio has provided a library sciences program since the fall of 2000 with a minimum number of credit hours offered. The program has reported off and on with the highest reporting of 42 hours in the summer of 2005. TAMU-Corpus Christi has reported declining credit hours since the program peaked in 2002 with 188 SCHs. The program last reported 83 SCHs in 2007. TAMU-Corpus Christi did not report SCHs for its physical training program in FY 2009. They reported 278 SCHs in the previous fiscal year. UH-Clear Lake reported 12, 15, and 30 pharmacy SCHs in FYs 2008, 2007, and 2005 respectively. This program did not report in FY 2009. UH-Victoria reported 9 and 39 SCHs in FYs 2008 and 2007 respectively with no activity in FY 2009. The program's initial activity of 39 SCHs was reported in FY 2002.

[13] TAMU-Galveston's rate grew from $15,140 to $18,468 due to expenditures increasing by 26 percent. Mitigated by a 3 percent increase in FTSE, spend increased in designated Institutional Support (1.5 million to $6 million). The rate at Tarleton also increased 11 percent ($7,987 to $8,191) despite a 3 percent increase in FTSE. Expenditures increased from $8,604 to $9,563 or 14 percent. The institution reported $2.0 million more in research capital outlays and $2.5 million more in academic support when compared to the previous year.

[14] UT-Brownsville FTSE increased 8 percent. The change in rate was due to a 21 percent increase in expense in all five NACUBO categories, which increased equally.

[15] North Texas FTSE increased only 1 percent. The change in rate is due to a 12 percent increase in expense. $22 million of the $33 million in expenditure increases were reported in instruction.

[16] Angelo's FTSE decreased 2 percent due to a 10 percent increase in spend. The institution reported $3 million more in instruction and $2 million more in student services this year compared to last.

[17] Victoria's rate increase was due to a 14 percent increase in FTSE and a 5 percent decrease in expenditures.

[18] Lamar's expenditure per SCH rate decreased due to a 22 percent increase in FTSE. This was despite an 8 percent increase in expenditures (localized to academic support).

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