

The Cost of Instruction: Using Analytics to Improve Decision-Making about Academic Programs

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Welcome!



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Concordia University Nebraska



Mission

is an excellent academic and Christ-centered community equipping men and women for lives of learning, service and leadership in the church and world.

- A private, coeducational institution founded in 1894 by the Lutheran Church-Missouri Synod
- Part of the Concordia University System
- 1,300 traditional undergrads and 600 graduate students
- \$40M annual budget/\$50M endowment
- Tuition-driven!
- Located in Seward, NE (population 7,000) 25 miles west of Lincoln

Agenda

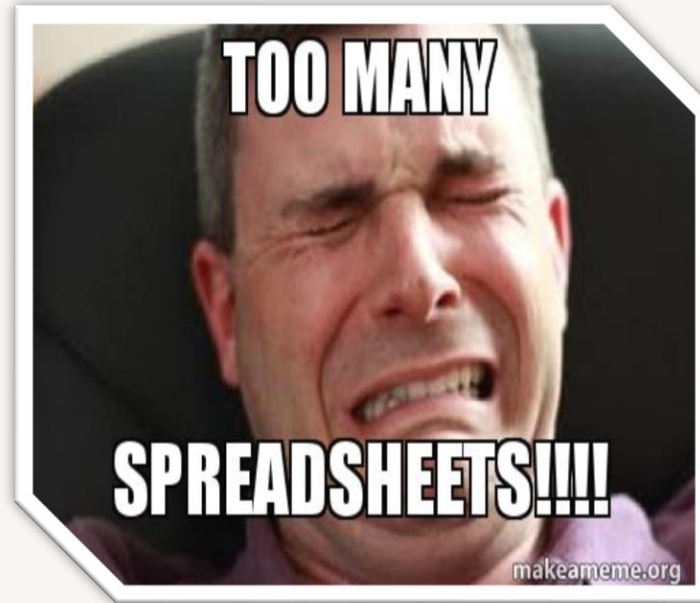


- Brief history and background
- Components of COI
- How revenue and expenses are allocated
- Sample reports
- Questions

Troubled Waters for Higher Education



- Colleges and universities must be able to:
 - operate as cost effectively as possible
 - understand their revenues and costs
- Having a data model with the ability to allocate revenues and costs by college, department, program and course is vital to strategic planning and resource allocation
- The data needed to construct such a robust data model are distributed across disparate ERP subsystems (Student, HR and Finance)



- Considerable work done in this area
- Good understanding of the issues involved
- “Manual” work all done in Excel
- Blackboard Analytics customer

Blackboard Analytics



- Set of pre-built dimensional data warehouse models integrating with Banner, PeopleSoft and Colleague
- Includes modules Student, Financial Aid, Finance, HR, Advancement and Blackboard Learn
- Sophisticated transformation logic reflecting a deep understanding of underlying ERP content/structure
- Dimensional model implemented in relational *and* multi-dimensional layers
- www.blackboard.com/analytics





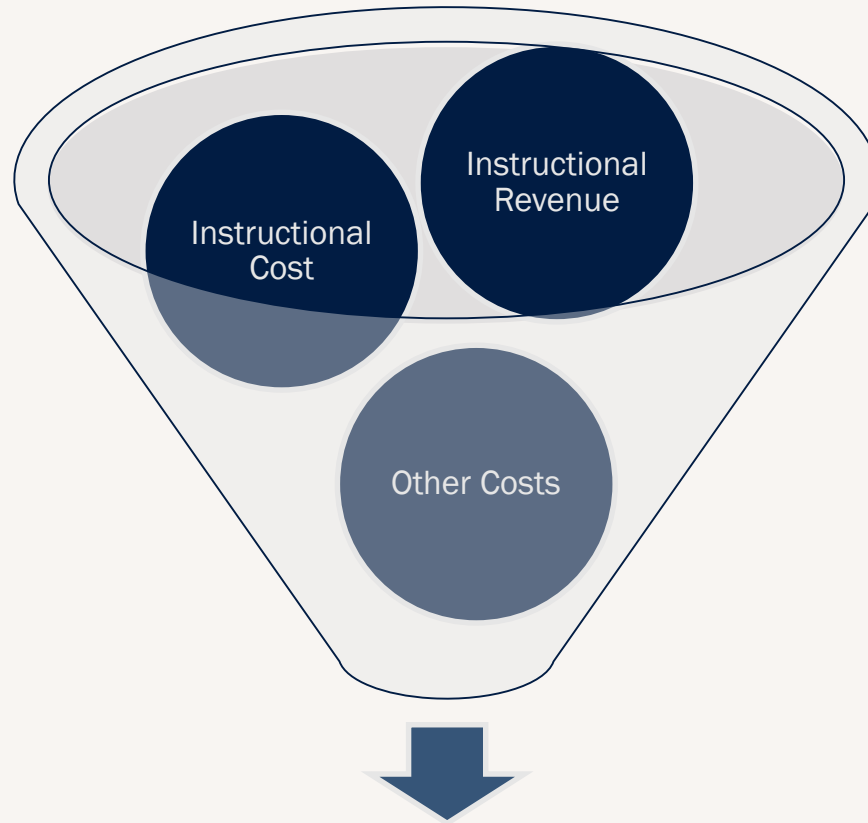
- Blackboard wanted to further develop its data model
- Concordia wanted to stop using spreadsheets
- Beta partners! (Banner)

Introducing Cost of Instruction (COI)



- Blackboard has tackled the challenge by developing a data model and methodology that reflects institutional business practices in computing instructional revenues and expenses
- These computations are done at the most detailed level
 - Course section
 - Student
- Allows revenues and expenses to be aggregated over the wide array of dimensions available in the Blackboard Intelligence data warehouse

Main Components of COI



Cost of Instruction (COI)

Instructional Revenue



Tuition and fees

- Identify which revenue items are “instructional”
 - can exclude housing, meals, parking, etc.
- Tuition and fee revenue are allocated on a TERM basis
 - allocated across the sections in which the student is enrolled
 - If fees are for a particular course – they follow that course

Institutional financial aid

- Identify which financial aid items count as “institutional”
- Allocated across the sections in which the student is enrolled – just like tuition and fees

Instructional Cost



- Baseline model captures direct instructional personnel costs (instructor salary + benefits)
- Determining an instructor's salary for a term or academic year and allocating it across class sections is more difficult than one might expect!
- Complicating factors include:
 - multiple job assignments
 - instructional vs non-instructional duties
 - alignment of HR dates with academic calendar
 - cross listing
 - ungraded sections (labs)

Instructional Cost



Compensation – based off contract type

– In Banner: faculty load contract type control rules table (PTRFLCT)

Course-based/
Term-based

- Payroll tied directly to the course it is linked to (adjunct pay) – different position number/suffix combo used for each section

Salaried/
Year-based

- Payroll allocated based off position number and position suffix (FLAC) – same position number/suffix combo used for all sections taught using one of these methods:
 - section count
 - credits
 - workload hours – uses position number and position suffix (CUNE uses this method)
 - overload pay is split evenly across all courses taught over entire academic year

Instructional Cost



Budget



Actual

VS

- The Banner data model includes both salary-based (budget) and payroll-based (actual) measures
 - using payroll data yields more accurate data for employee benefits
 - for Concordia, actual payroll data was needed, primarily due to the way overloads are handled
- The logic for mapping payroll dates to terms/academic years was challenging!

Other Costs



- The model's original functionality captured only the direct instructional personnel costs
- This was not enough so we challenged Blackboard!
- Concordia wanted the ability to include other costs in our cost allocations
 - indirect instructional costs
 - personnel – chairs, deans, administrative
 - non-personnel – academic overhead costs
 - non-instructional operating costs

Other Costs



- What should you include???
- Admissions
- Registrar
- Athletics
- Recruitment
- Career Services
- Advancement
- President/Board
- Student Financial Services
- Marketing

We can't answer that question for you
but the model allows YOU to decide!

Super Crosswalk Table



- A “super crosswalk table” was developed to allow functional experts to specify which “other costs” they want to be included in the model
- FOAPAL codes are used to give precise control over exactly which costs to allocate
- The functional expert populates a spreadsheet (uploaded to custom Banner table) that specifies which FOAPAL codes to include and how they will be allocated:
 - course credit hours
 - student headcount
 - student credit hours



Allocation by Course Credit Hours



Fund Code	Organization Code	Organization	Account Type	Account Code	Program Code	Group Num	Seq Num	Percentage	Effective Year	Allocation Method	Course Level Code	Course College Code	Course Dept Code	Course Subject Code	Course Number	Course Campus Code	Instruction Method Code
1	91000	Arts and Sciences - Payroll	6	ALL	NON313	1	1	100	2018	CRSE	UG	AS				J	
1	91001	Dean of Arts and Sciences	7	ALL	NON313	1	1	100	2018	CRSE	UG	AS				J	
1	91010	Art - Payroll	6	ALL	313	1	1	100	2018	CRSE	UG		ART			J	
1	91011	Art - General	6	ALL	313	1	1	100	2018	CRSE	UG		ART			J	
1	91011	Art - General	7	ALL	313	1	1	100	2018	CRSE	UG		ART			J	
1	91071	Communications & Theatre Arts	6	ALL	313	1	1	100	2018	CRSE	UG		ENG	CTA		J	
1	91071	Communications & Theatre Arts	7	ALL	313	1	1	100	2018	CRSE	UG		ENG	CTA		J	

Allocation by Student Headcount

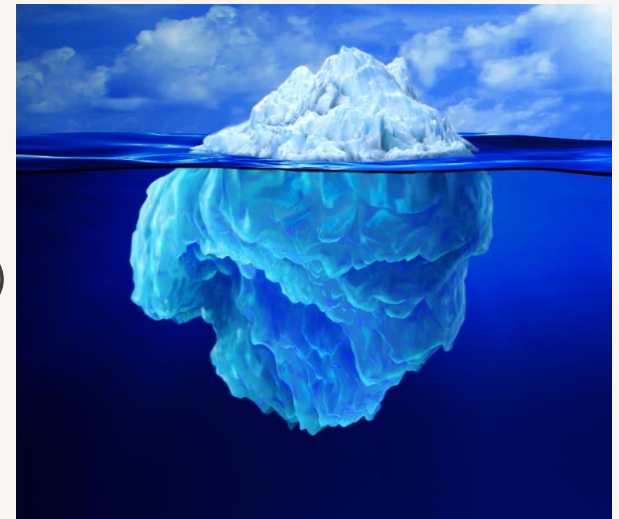


Fund Code	Organization Code	Organization	Account Type	Account Code	Program Code	Group Num	Seq Num	Percentage	Effective Year	Allocation Method	Student Level Code	Student Campus Code	Student College Code	Student Population Code	Population Group Code	Gender Code
1	77001	Athletic Administration	6	ALL	NON 313	1	1	100	2017	HDCT					Athletics	
1	77001	Athletic Administration	7	ALL	NON 313	1	1	100	2017	HDCT					Athletics	
1	77000	Athletic Administration Payroll	6	ALL	NON 313	1	1	100	2017	HDCT					Athletics	
1	71210	Trap & Skeet Payroll	6	ALL	NON 313	1	1	100	2017	HDCT				ISHOOT	Performance	
1	71211	Trap & Skeet	7	ALL	NON 313	1	1	67	2017	HDCT				ISHOOT	Performance	
1	60013	Sports Information	6	ALL	NON 313	1	1	100	2017	HDCT					Athletics	
1	60013	Sports Information	7	ALL	NON 313	1	1	100	2017	HDCT					Athletics	
1	77020	Football Payroll	6	ALL	NON 313	1	1	100	2017	HDCT				IFTB	Athletics	
1	77021	Football	6	ALL	NON 313	1	1	100	2017	HDCT				IFTB	Athletics	
1	77021	Football	7	ALL	NON 313	1	1	100	2017	HDCT				IFTB	Athletics	
1	77030	Men's Basketball payroll	6	ALL	NON 313	1	1	100	2017	HDCT				IBK	Athletics	M
1	77031	Men's Basketball	6	ALL	NON 313	1	1	100	2017	HDCT				IBK	Athletics	M
1	77031	Men's Basketball	7	ALL	NON 313	1	1	100	2017	HDCT				IBK	Athletics	M
1	77040	Baseball payroll	6	ALL	NON 313	1	1	100	2017	HDCT				IBAS	Athletics	
1	77041	Baseball	6	ALL	NON 313	1	1	100	2017	HDCT				IBAS	Athletics	
1	77041	Baseball	7	ALL	NON 313	1	1	100	2017	HDCT				IBAS	Athletics	

Advantages of Embedding COI into a Dimensional Model

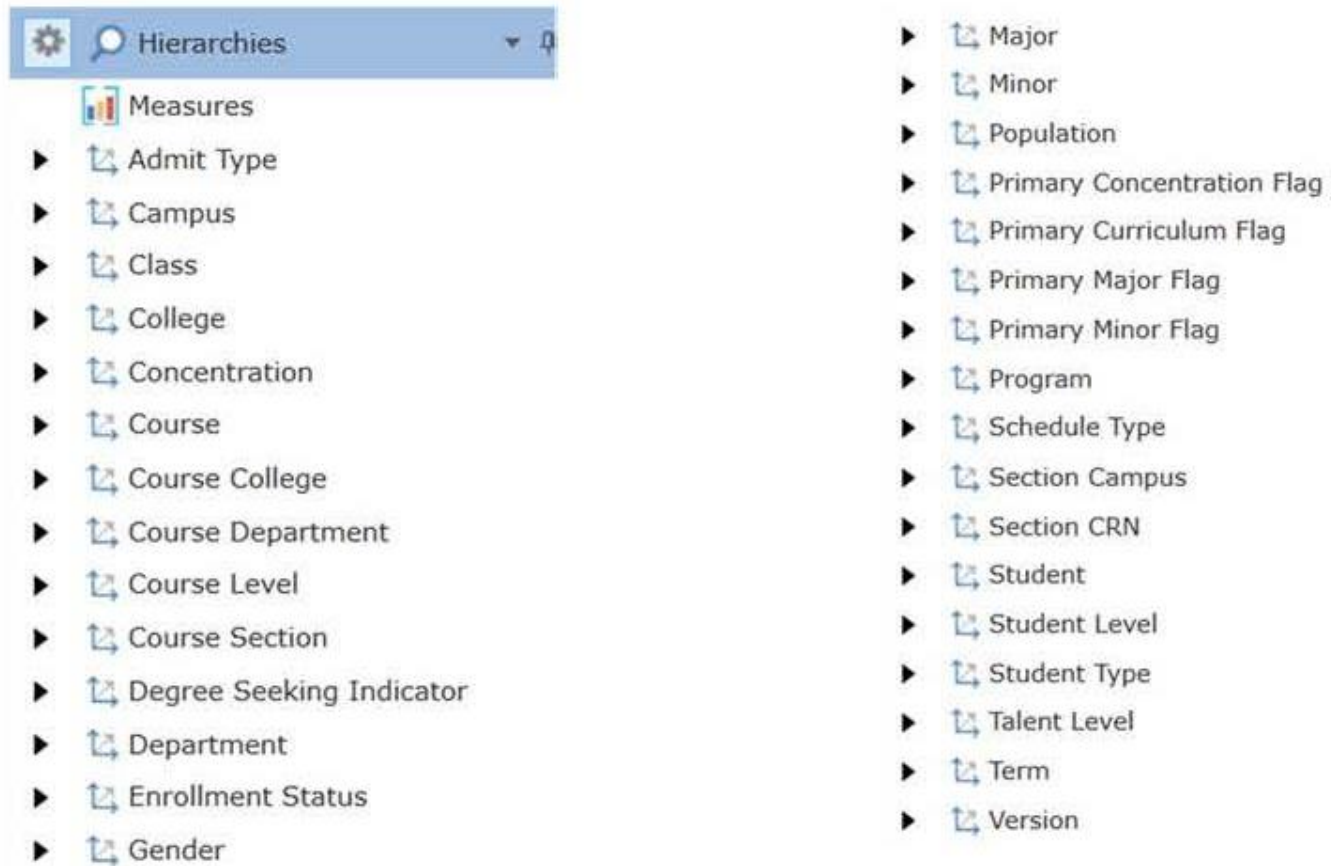


- By allocating revenues and costs down to the finest possible grains, we can then aggregate, slice and dice over the wide array of dimensions available in the Blackboard Intelligence data warehouse
- Revenues, costs and margins can be aggregated and averaged by:
 - college
 - department
 - program
 - section/course
 - student (level, type cohort, major, population)
 - instructor (full-time, adjunct)
 - etc.



Dimension Hierarchies



- 
- A screenshot of a software interface showing a list of dimension hierarchies. The interface has a blue header bar with a gear icon, a search icon, and the text "Hierarchies". Below the header, there is a "Measures" section with a bar chart icon. The list of hierarchies is organized into two columns. Each item in the list is preceded by a right-pointing triangle icon and a small icon representing the dimension type (e.g., a document icon for flags, a person icon for student-related items, or a calendar icon for time-related items).
- ▶ Admit Type
 - ▶ Campus
 - ▶ Class
 - ▶ College
 - ▶ Concentration
 - ▶ Course
 - ▶ Course College
 - ▶ Course Department
 - ▶ Course Level
 - ▶ Course Section
 - ▶ Degree Seeking Indicator
 - ▶ Department
 - ▶ Enrollment Status
 - ▶ Gender
 - ▶ Major
 - ▶ Minor
 - ▶ Population
 - ▶ Primary Concentration Flag
 - ▶ Primary Curriculum Flag
 - ▶ Primary Major Flag
 - ▶ Primary Minor Flag
 - ▶ Program
 - ▶ Schedule Type
 - ▶ Section Campus
 - ▶ Section CRN
 - ▶ Student
 - ▶ Student Level
 - ▶ Student Type
 - ▶ Talent Level
 - ▶ Term
 - ▶ Version

After Information is Loaded....



Example Instructional Payroll Reports

Instructor Payroll Comparison



Shows last 4 year total payroll

	Class Instructor Total Payroll Plus Benefits			
	2015	2016	2017	2018
All Faculty	\$1,191,461.62	\$1,638,541.94	\$1,958,099.19	\$1,691,027.07
(b)		\$2,583.60	\$7,750.80	\$12,918.00
(c)		\$2,583.60	\$4,650.48	\$3,617.04
(3)		\$4,133.76	\$2,583.60	\$242.21
	\$3,539.10	\$6,600.21	\$4,225.77	\$2,563.72
			\$4,101.47	
(7)		\$4,844.25		
				\$4,198.36
			\$2,583.60	
(5)				\$5,813.10
	\$650.00			
	\$6,717.37	\$6,297.53	\$8,396.70	\$9,306.30

Identify fluctuations and drill down in the hierarchies

- department chairs
- strategic planning
- other coordinator positions

Term Based Payroll Detail



		Section Count	Adjusted Section Count	Adjusted Section Credit Hours	COI Enrollment Total	COI Class Student Credit Hours	Class Instructor Total Payroll Plus Benefits
Jane Doe 1	All Courses	3.00	3.00	9.00	33	99.00	\$7,750.80
	XATHAD - 70	1.00	1.00	3.00	13	39.00	\$2,583.60
	XATHAD - 71	1.00	1.00	3.00	13	39.00	\$2,583.60
	XATHAD - 72	1.00	1.00	3.00	7	21.00	\$2,583.60
Jane Doe 2	All Courses	2.00	2.00	6.00	13	39.00	\$4,650.48
	XMBA00 - 70	1.00	1.00	3.00	9	27.00	\$2,583.60
	XMBA00 - 71	1.00	1.00	3.00	4	12.00	\$2,066.88
Jane Doe 3	All Courses	4.00	4.00	12.00	10	30.00	\$4,225.77
	AJ9122 - 72	1.00	1.00	3.00	3	9.00	\$1,346.44
	AJ9876 - 70	1.00	1.00	3.00	5	15.00	\$2,559.22
	AJ9876 - 71	1.00	1.00	3.00	1	3.00	\$159.82
	AJ9876 - 73	1.00	1.00	3.00	1	3.00	\$160.29

Year Based Payroll Detail



	Term	Adjusted Section Count	Adjusted Section Credit Hours	COI Enrollment Total	COI Class Student Credit Hours	Class Instructor Total Payroll Plus Benefits
Jane Doe 1	2016	7.00	23.00	121	403.00	\$77,870.19
	2017	8.00	26.00	117	376.00	\$82,227.49
Jane Doe 2	2016	8.00	24.00	82	246.00	\$51,520.68
	2017	11.00	33.00	84	252.00	\$34,699.23
Jane Doe 3	2016	9.00	25.00	150	448.00	\$83,472.16
	2017	12.00	36.00	148	444.00	\$86,677.72
Jane Doe 4	2016	12.00	49.00	149	619.00	\$36,143.64
	2017	10.00	53.00	163	539.00	\$36,669.17
Jane Doe 5	2016	10.00	27.00	177	518.00	\$70,159.44
	2017	9.00	27.00	155	465.00	\$58,733.91

Budget (Salary) vs Payroll Measures by Instructor



		Class Instructor Total Salary Plus Benefits	Class Instructor Total Payroll Plus Benefits
		2018	2018
[Redacted]	Term Based	\$7,776.00	\$7,659.87
	Year Based	\$88,855.65	\$91,134.19
[Redacted]	Year Based	\$90,890.10	\$89,119.08
[Redacted]	Year Based	\$66,908.70	\$74,200.36

Salary Type by Department



Class Instructor Total Payroll Plus Benefits

	Department 1			Department 2			Department 3		
	All Salary Distribution Types	Term Based	Year Based	All Salary Distribution Types	Term Based	Year Based	All Salary Distribution Types	Term Based	Year Based
	2016	\$369,954.72	\$16,187.32	\$353,767.40	\$554,292.49	\$117,937.89	\$436,354.60	\$603,521.84	\$188,500.70
2017	\$428,227.63	\$11,932.39	\$416,295.24	\$562,641.43	\$128,211.54	\$434,429.89	\$648,720.21	\$217,550.68	\$431,169.53

Term Based (adjunct)

Year Based (full-time faculty)

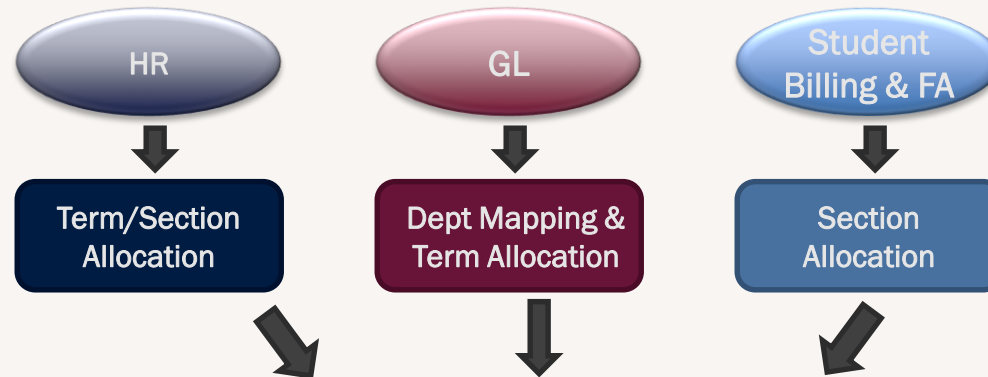
Payroll Amounts by Course



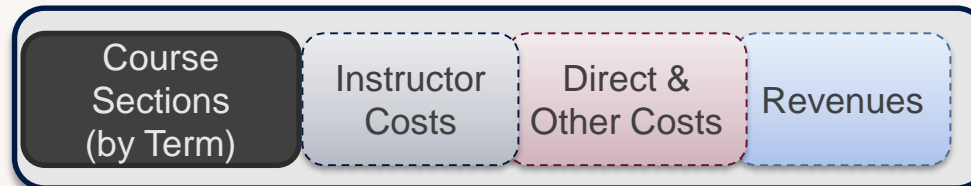
	Adjusted Section Count	Adjusted Section Credit Hours	COI Enrollment Total	COI Class Student Credit Hours	Class Instructor Total Payroll Plus Benefits	Payroll per credit hour
MUAP 101	1.00	1.00	3	3.00	\$2,239.14	\$746.38
MUAP 102	2.00	2.00	9	9.00	\$2,890.41	\$321.16
MUAP 201	1.00	1.00	1	1.00	\$2,115.29	\$2,115.29
MUAP 202	2.00	2.00	55	55.00	\$11,102.35	\$201.86
ART 101	2.00	6.00	47	141.00	\$8,006.13	\$56.78
ART 375	1.00	3.00	1	3.00	\$1,805.10	\$601.70
ART 400	3.00	9.00	21	63.00	\$16,154.50	\$256.42
BIO 343	1.00	3.00	39	117.00	\$9,192.17	\$78.57
BIO 345	1.00	1.00	7	7.00	\$3,215.97	\$459.42
BUS 399	1.00	3.00	2	6.00	\$6,419.73	\$1,069.95
EDUC 346	2.00	6.00	41	123.00	\$3,900.00	\$31.71

Example COI Measure Reports

Integrates Cross-functional Data



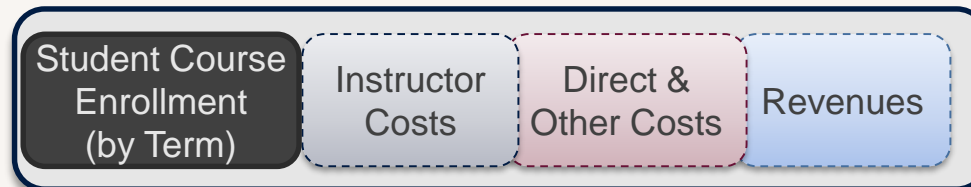
FactClassScheduleFinancial



Course Attributes

- Department
- College
- Instruction Method

FactRegistrationFinancial



Student Attributes

- Major
- Class
- Level

COI Measures by Course College and Department



	COLLEGE 1				COLLEGE 2			
	Department 1		Department 2		Department 1		Department 2	
	2017	2018	2017	2018	2017	2018	2017	2018
Gross Combined Tuition And Fee Revenue	\$2,835,042.89	\$3,004,425.00	\$383,068.88	\$471,235.96	\$1,622,523.08	\$1,694,071.81	\$1,702,187.13	\$1,781,630.13
Combined Tuition And Fee Discount Applied	(\$1,601,182.96)	(\$1,793,976.00)	(\$145,029.36)	(\$216,091.76)	(\$960,401.45)	(\$1,020,600.89)	(\$1,033,030.91)	(\$1,079,627.44)
Discounted Combined Tuition And Fee Revenue	\$1,233,859.84	\$1,210,448.00	\$238,039.51	\$255,144.19	\$662,121.59	\$673,470.90	\$669,156.18	\$702,002.65
Tuition Discount Rate	56.48%	59.71%	37.86%	45.86%	59.19%	60.25%	60.69%	60.60%
Instructional Cost Instructor Compensation	\$369,954.72	\$426,830.00	\$75,487.31	\$68,802.37	\$338,026.18	\$288,307.37	\$598,796.94	\$647,477.77
Instructional Cost Non Personnel	\$7,632.78	\$7,600.00	\$19,768.26	\$23,061.12	\$1,225.96	\$1,048.39	\$127,975.76	\$118,416.60
Instructional Cost Other Personnel	\$9,630.24	\$7,788.00	\$68,089.36	\$72,056.47	\$33,660.04	\$31,950.26	\$98,382.77	\$98,738.70
Instructional Cost Total	\$387,217.74	\$444,218.00	\$163,344.93	\$163,919.97	\$372,912.18	\$321,306.02	\$825,155.47	\$864,633.06
Net Tuition Revenue (Discounted Combined Tuition and Fee Revenue - Instructional Cost)	\$846,642.10	\$768,230.00	\$74,694.58	\$91,224.22	\$289,209.40	\$352,164.88	(\$155,999.29)	(\$162,630.41)
Gross Margin (Net Tuition Revenue/Disc Combined Tuition and Fee Revenue)	68.62 %	63.47 %	31.38 %	35.75 %	43.68 %	52.29 %	-23.31 %	-23.17 %
Non Instructional Cost Non Personnel	\$115,272.68	\$103,858.00	\$7,161.95	\$6,811.22	\$53,245.42	\$47,030.34	\$29,358.31	\$23,648.30
Non Instructional Cost Personnel	\$336,770.25	\$347,724.00	\$34,122.24	\$31,801.84	\$156,651.60	\$159,841.30	\$92,892.45	\$84,637.28
Non Instructional Cost Total	\$452,042.93	\$451,583.00	\$41,284.19	\$38,613.06	\$209,897.02	\$206,871.64	\$122,250.76	\$108,285.58
Total Cost For Student	\$839,260.67	\$893,801.00	\$204,629.12	\$202,533.03	\$582,809.20	\$528,177.66	\$947,406.22	\$972,918.64
Distinct Students	737.00	685.00	73.00	72.00	432.00	392.00	436.00	434.00
Adjusted Student Credit Hours	3,292.00	3,234.00	657.00	640.00	1,905.00	1,869.00	1,903.20	1,866.90
Avg Cost per Student Credit Hour	\$254.94	\$276.33	\$311.46	\$316.46	\$305.94	\$282.60	\$497.80	\$521.14
Avg Revenue per Student Credit Hour Discounted	\$374.81	\$374.23	\$362.31	\$398.66	\$347.57	\$360.34	\$351.60	\$376.03
Avg Margin per Student Credit Hour Discounted	\$119.87	\$97.90	\$50.85	\$82.20	\$41.63	\$77.74	(\$146.20)	(\$145.12)
Non Instructional Cost per credit hour	\$137.32	\$139.61	\$62.84	\$60.33	\$110.18	\$110.69	\$64.23	\$58.00
Instructional Cost per credit hour	\$117.62	\$136.72	\$248.62	\$256.12	\$195.75	\$171.91	\$433.56	\$463.14

COI Measures by Course



	Adjusted Section Count	Adjusted Section Credit Hours	COI Enrollment Total	COI Class Student Credit Hours	Class Instructor Total Payroll Plus Benefits	Instructional Cost Total	Non Instructional Cost Total	Class Cost Total	Discounted Combined Tuition And Fee Revenue	Margin Discounted % - CSF (Disc Class Margin/Disc Comb Tuition and Fee Revenue)
Course 1	2.00	6.00	2	6.00	\$20,693	\$21,070	\$252	\$21,322	\$1,390	-1,434.03 %
Course 2	1.00	3.00	1	3.00	\$1,590	\$1,596	\$107	\$1,703	\$157	-987.99 %
Course 3	2.00	2.00	2	2.00	\$9,994	\$10,113	\$35	\$10,147	\$977	-938.74 %
Course 4	5.00	15.00	7	21.00	\$89,086	\$89,146	\$2,080	\$91,226	\$9,079	-904.79 %
Course 5	1.00	1.00	10	10.00	\$28,339	\$28,705	\$645	\$29,350	\$3,636	-707.28 %
Course 6	17.00	11.90	119	65.10	\$102,161	\$104,737	\$989	\$105,727	\$19,322	-447.18 %
Course 7	16.00	16.00	41	41.00	\$45,311	\$47,087	\$855	\$47,942	\$16,113	-197.53 %
Course 8	6.00	18.00	28	84.00	\$39,913	\$40,516	\$1,843	\$42,358	\$32,072	-32.07 %
Course 9	4.00	4.00	41	41.00	\$9,334	\$9,438	\$3,764	\$13,202	\$10,067	-31.15 %
Course 10	5.00	11.00	47	100.00	\$42,962	\$43,376	\$855	\$44,231	\$34,635	-27.71 %
Course 11	3.00	3.00	62	62.00	\$11,376	\$12,322	\$7,727	\$20,050	\$22,261	9.93 %
Course 12	4.00	9.00	30	61.00	\$19,466	\$19,794	\$677	\$20,471	\$22,729	9.94 %
Course 13	3.00	3.00	5	5.00	\$1,674	\$1,764	\$61	\$1,825	\$2,028	9.98 %
Course 14	17.00	13.10	949	717.50	\$160,513	\$196,469	\$15,614	\$212,084	\$262,591	19.23 %
Course 15	6.00	18.00	81	243.00	\$10,255	\$27,085	\$70,979	\$98,065	\$122,599	20.01 %
Course 16	7.28	14.56	76	152.00	\$42,424	\$45,374	\$4,790	\$50,164	\$62,717	20.01 %
Course 17	7.00	17.00	170	408.00	\$27,218	\$52,264	\$30,595	\$82,859	\$104,684	20.85 %
Course 18	17.00	51.00	417	1,251.00	\$135,012	\$136,740	\$60,953	\$197,693	\$419,339	52.86 %
Course 19	3.00	30.00	16	160.00	\$1,087	\$1,087	\$0.00	\$1,087	\$63,196	98.28 %

COI Measures by Major



	Major 1	Major 2	Major 3	Major 4	Major 5	Major 6	Major 7
Gross Combined Tuition And Fee Revenue	\$1,856,947	\$3,935,348	\$5,431,693	\$166,470	\$473,360	\$1,406,690	\$144,365
Combined Tuition And Fee Discount Applied	(\$1,078,871)	(\$2,432,429)	(\$2,584,251)	(\$105,890)	(\$306,313)	(\$718,425)	(\$67,075)
Discounted Combined Tuition And Fee Revenue	\$778,076	\$1,502,919	\$2,847,442	\$60,580	\$167,047	\$688,265	\$77,290
Tuition Discount Rate	58.10%	61.81%	47.58%	63.61%	64.71%	51.07%	46.46%
Instructional Cost Instructor Compensation	\$205,634	\$626,678	\$756,122	\$57,725	\$152,150	\$235,472	\$23,720
Instructional Cost Non Personnel	\$11,943	\$36,247	\$150,702	\$6,152	\$17,820	\$25,170	\$1,541
Instructional Cost Other Personnel	\$26,541	\$43,877	\$96,378	\$6,773	\$17,690	\$64,996	\$3,459
Instructional Cost Total	\$244,118	\$706,801	\$1,003,202	\$70,651	\$187,660	\$325,638	\$28,720
Net Tuition Revenue (Discounted Combined Tuition and Fee Revenue - Instructional Cost)	\$533,958	\$796,118	\$1,844,240	(\$10,071)	(\$20,613)	\$362,627	\$48,570
Gross Margin (Net Tuition Revenue/Disc Combined Tuition and Fee Revenue)	68.63 %	52.97 %	64.77 %	-16.62 %	-12.34 %	52.69 %	62.84 %
Athletic Cost Total	\$158,470	\$370,768	\$491,511	\$2,455	\$6,908	\$22,253	\$5,602
Athletic Personnell Costs per Distinct Student	\$1,549	\$1,845	\$1,137	\$309	\$254	\$283	\$620
Non Instructional Cost Total	\$235,144	\$516,028	\$1,102,408	\$7,820	\$23,676	\$83,021	\$11,702
Total Cost For Student	\$479,263	\$1,222,829	\$2,105,610	\$78,471	\$211,335	\$408,659	\$40,422
Discounted Class Margin For Student - RF - Disc Comb Tuition and Fee Revenue - Class Cost Total	\$298,814	\$280,090	\$741,832	(\$17,891)	(\$44,288)	\$279,606	\$36,868
Margin Discounted % - RF (Disc Class Margin/Disc Comb Tuition and Fee Revenue)	38.40 %	18.64 %	26.05 %	-29.53 %	-26.51 %	40.62 %	47.70 %
Distinct Students	77.00	153.00	330.00	6.00	21.00	60.00	7.00
Adjusted Student Credit Hours	1,988.50	4,211.30	6,301.90	156.70	504.10	1,633.70	174.10
Avg Cost per Student Credit Hour	\$241.02	\$290.37	\$334.12	\$500.77	\$419.23	\$250.14	\$232.18

Student Majors/Department Courses



	Art (ART)	Business Administration (BUS)	Education Department (EDUC)	History Geography Crim Justice (HG CJ)	Music (MUSI)	Science (SCI)
Art (ART)	\$ 257,799	\$ 22,640	\$ 35,000	\$ 9,845	\$ 4,843	\$ 5,435
Business (BUS)	\$ 46,623	\$ 456,254	\$ 118,282	\$ 8,953	\$ 3,528	\$ 7,521
Business Communication (BSCO)	\$ 28,779	\$ 65,468	\$ 5,434	\$ 7,814	\$ 5,689	\$ 6,598
Criminal Justice (CMJM)	\$ 18,864	\$ 25,365	\$ 25,103	\$ 10,215	\$ 2,689	\$ 21,352
Elementary Education (ZELE)	\$ 4,576	\$ 18,574	\$ 6,458	\$ 3,125	\$ 15,358	\$ 15,245
History (HIST)	\$ 4,612	\$ 3,524	\$ 2,425	\$ 126,232	\$ 9,458	\$ 3,252
History Education (ZHIS)	\$ 27,126	\$ 3,848	\$ 5,848	\$ 85,565	\$ 3,520	\$ 8,125
Music (MU)	\$ 15,354	\$ 20,005	\$ 3,504	\$ 3,524	\$ 958,014	\$ 7,514
Theology (THE)	\$ 3,867	\$ 5,005	\$ 2,540	\$ 15,235	\$ 50,450	\$ 3,512
Undeclared (0000)	\$ 2,548	\$ 8,900	\$ 6,589	\$ 5,400	\$ 3,545	\$ 1,954

Columns – departments that offer the courses the students are taking
 Rows – departments in which students have their majors

COI Measures by Student Level



	Undergraduate				Graduate
	Freshman	Sophomore	Junior	Senior	
Gross Combined Tuition And Fee Revenue	\$7,792,468.07	\$7,671,699.44	\$7,903,617.29	\$9,850,896.37	\$9,896,982.37
Combined Tuition And Fee Discount Applied	(\$4,861,808.23)	(\$4,592,591.02)	(\$4,561,060.40)	(\$5,220,121.52)	(\$1,413,548.00)
Discounted Combined Tuition And Fee Revenue	\$2,930,659.54	\$3,079,108.35	\$3,342,556.93	\$4,630,774.89	\$8,483,434.37
Tuition Discount Rate	62.39 %	59.86 %	57.71 %	52.99 %	14.28 %
Instructional Cost Instructor Compensation	\$823,917.72	\$1,052,872.44	\$1,298,494.02	\$1,927,815.52	\$1,447,838.52
Instructional Cost Non Personnel	\$57,200.16	\$92,345.92	\$100,596.73	\$144,020.19	\$1,235,009.63
Instructional Cost Other Personnel	\$115,052.26	\$169,178.45	\$202,219.82	\$326,421.25	\$508,851.94
Instructional Cost Total	\$996,170.14	\$1,314,396.81	\$1,601,310.57	\$2,398,256.96	\$3,191,700.09
Net Tuition Revenue (Discounted Combined Tuition and Fee Revenue - Instructional Cost)	\$1,934,489.40	\$1,764,711.53	\$1,741,246.36	\$2,232,517.93	\$5,291,734.28
Gross Margin (Net Tuition Revenue/Disc Combined Tuition and Fee Revenue)	66.01 %	57.31 %	52.09 %	48.21 %	62.38 %
Athletic Cost Total	\$827,168.53	\$648,200.80	\$501,519.82	\$657,419.81	\$674.80
Athletic Cost Personnel	\$632,103.69	\$492,967.38	\$379,384.48	\$498,333.31	\$548.00
Non Instructional Cost Total	\$1,111,894.40	\$948,099.50	\$824,297.46	\$1,048,436.93	\$3,393,698.16
Total Cost For Student	\$2,108,064.54	\$2,262,496.31	\$2,425,608.03	\$3,446,693.89	\$6,585,398.25
Discounted Class Margin For Student - RF - Disc Comb Tuition and Fee Revenue - Class Cost Total	\$822,595.00	\$816,612.03	\$916,948.90	\$1,184,081.00	\$1,898,036.13
Margin Discounted % - RF (Disc Class Margin/Disc Comb Tuition and Fee Revenue)	28.07 %	26.52 %	27.43 %	25.57 %	22.37 %
Distinct Students	340.00	403.00	429.00	501.00	1,303.00
Adjusted Student Credit Hours	8,188.80	8,528.60	9,010.60	11,025.40	15,862.00
Avg Cost per Student Credit Hour	\$257.43	\$265.28	\$269.19	\$312.61	\$415.17

One step further....



Dimensions were added for our three main population groups:

- Academic
- Athletic
 - baseball
 - basketball
 - football
 - etc.
- Performance
 - art
 - music
 - drama
 - forensics
 - etc.

Athletic Cost Includes...



- Personnel and non-personnel costs
 - Payroll for coaches and other athletic administration
 - Team operating budgets
 - Overhead operating budgets such as:
 - Training
 - Recruitment
 - Athletic administration
 - Strength and conditioning

COI Measures by Athletic Team



	Team 1	Team 2		Team 3	Team 4	
		Female (F)	Male (M)		Female (F)	Male (M)
Gross Combined Tuition And Fee Revenue	\$1,744,060	\$744,520	\$799,010	\$602,025	\$200,820	\$328,280
Combined Tuition And Fee Discount Applied	(\$1,052,051)	(\$514,630)	(\$522,660)	(\$382,708)	(\$140,920)	(\$196,180)
Discounted Combined Tuition And Fee Revenue	\$692,009	\$229,890	\$276,350	\$219,317	\$59,900	\$132,100
Tuition Discount Rate	60.32%	69.12%	65.41%	63.57%	70.17%	59.76%
Instructional Cost Total	\$237,752	\$112,265	\$110,582	\$98,279	\$34,754	\$44,454
Net Tuition Revenue (Discounted Combined Tuition and Fee Revenue - Instructional Cost)	\$454,257	\$117,625	\$165,768	\$121,038	\$25,146	\$87,646
Gross Margin (Net Tuition Revenue/Disc Combined Tuition and Fee Revenue)	65.64%	51.17%	59.98%	55.19%	41.98%	66.35%
Athletic Cost Non Personnel	\$55,896	\$35,810	\$40,340	\$19,159	\$11,659	\$20,152
Athletic Cost Personnel	\$178,118	\$153,050	\$136,856	\$28,829	\$28,093	\$48,557
Athletic Cost Total	\$234,013	\$188,861	\$177,195	\$47,988	\$39,752	\$68,709
Athletic Costs per Distinct Students	\$3,774	\$7,264	\$6,328	\$2,285	\$5,679	\$5,726
Instructional Cost + Athletic Costs	\$471,766	\$301,126	\$287,777	\$146,267	\$74,505	\$113,163
Athletic Class Margin for Student	\$220,243	(\$71,236)	(\$11,427)	\$73,050	(\$14,605)	\$18,937
Athletic Discounted Margin %	31.83 %	-30.99 %	-4.14 %	33.31 %	-24.38 %	14.34 %
Discounted Class Margin For Student - RF - Disc Comb Tuition and Fee Revenue - Class Cost Total	\$154,133	(\$99,225)	(\$40,674)	\$48,223	(\$22,962)	\$6,801
Margin Discounted % - RF (Disc Class Margin/Disc Comb Tuition and Fee Revenue)	22.27 %	-43.16 %	-14.72 %	21.99 %	-38.33 %	5.15 %
Distinct Students	62.00	26.00	28.00	21.00	7.00	12.00
Adjusted Student Credit Hours	1,872.00	784.80	846.10	672.70	225.40	340.80
Avg Margin per Student Credit Hour Discounted	\$82.34	(\$126.43)	(\$48.07)	\$71.69	(\$101.87)	\$19.96
Non Instructional Cost per credit hour	\$160.32	\$276.31	\$243.99	\$8,147.32	\$213.43	\$237.22
Total Cost per credit hour	\$287.33	\$419.36	\$374.69	\$254.34	\$367.62	\$367.66

What to Focus On???



No margin, no mission!!!

Formed an Academic Program Analysis Team

- Initial focus on academic departments with gross margins of less than 50%
 - Instructional mode
 - Faculty workload
 - Operational efficiencies
 - Resource and capacity planning
 - Class planning and utilization
- Also taking a close look at athletic costs.

Analytics does not provide the answers...
it provides the data to ask the right questions

Questions?



- Click on the Resources link
- Visit www.blackboard.com/analytics

Thank You!

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