

Optimizing Benchmarking Data in College Business Offices and Beyond

Presentation Team



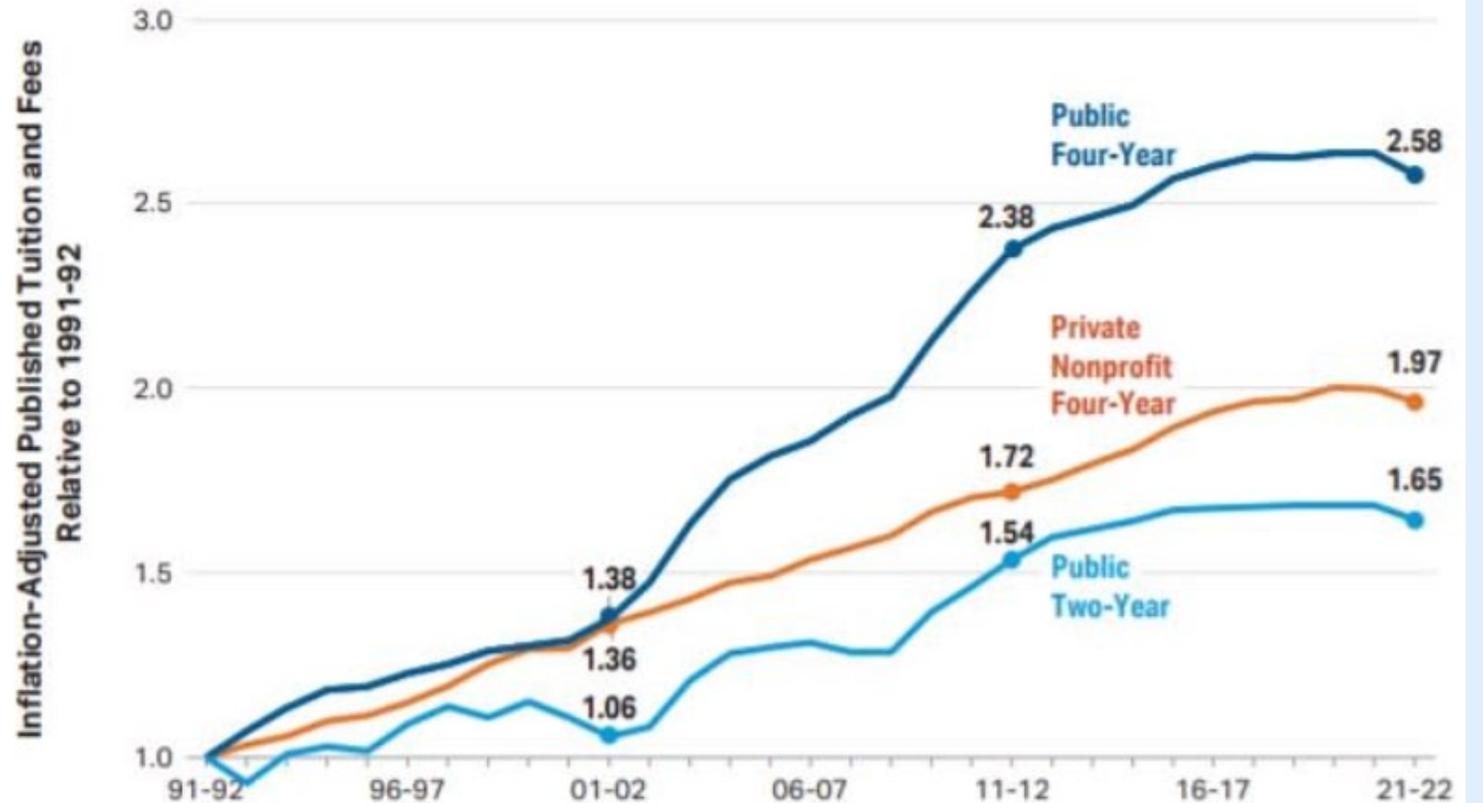
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Why do you need to benchmark your costs?

FIGURE CP-3 Inflation-Adjusted Published Tuition and Fees Relative to 1991-92, 1991-92 to 2021-22 (1991-92 = 1.0)



NOTE: Figure CP-3 shows published tuition and fees by sector, adjusted for inflation, relative to 1991-92 published prices. For example, a value of 2.58 indicates that the tuition and fee price in the public four-year sector in 2021-22 is 2.58 times as high as it was in 1991-92, after adjusting for increases in the Consumer Price Index. Average tuition and fee prices reflect in-district charges for public two-year institutions and in-state charges for public four-year institutions.

SOURCE: College Board, Annual Survey of Colleges; NCES, IPEDS Fall Enrollment data.

Why Benchmark Program Costs?

- Gain a better understanding of costs
- Reallocation of resources
- Determine tuition pricing
- Adjustment class capacities
- Inform staffing decisions
- Program review
- Accreditation – empirical data linked to planning
- Strategic management decisions
- Accountability (Trustees, Taxpayers, Accreditors)



OTC's Strategy/Reasoning/Usage for Benchmarking

OTC has the lowest level of state funding per full time-equivalent enrollment in the state of Missouri

As a result, the college is heavily dependent on tuition to fund operations

Important that the college knows:

- Optimal staffing and expense ratios
- Cost of program delivery to guide tuition levels

Sources of Benchmarks

Sources of national benchmarks provided by the Benchmarking Institute



Cost and Productivity Project



Cost & Productivity Project

Provides presidents, business officers, chief academic officers, deans and institutional researchers with benchmarks at the discipline level (CIP code)

- Instructional costs (salaries and benefits) and Non-personnel costs
- Faculty workload/productivity
- Class size

Cost & Productivity Project History

Summer 2002		Department of Education FIPSE project approval and grant award for “The Kansas Study”
Fall 2002 – Fall 2003		Advisory committee identified data elements, designs, processes, and conducted two pilot studies
2004	Year 1	Project implementation • 50 institutions
2010	Year 8	• 83 institutions
2013	Year 10	• New website: data collection, reporting
2016	Year 13	• Reporting most recent of 3-years of data
2021	Year 18	• Moved under the NCCBP website, expanded data collection to add Student & Admin Services

Cost & Productivity Project Timeline

May	Enrollment and data collection starts
August	Early bird registration closes August 1
November	Participant institutional data due on November 15; Outlier reports available
December	Verified and updated data due
January	New reports available; Peer Comparison Tool populated with most recent data

Data Entry

Helpful Filters: **Most Used** More Extensive

NOTE: Most Used is default

Expand All

Collapse All Family

Collapse All 4Digit

FILTERED LIST

Collapse/
Expand

CIP Titles
(Hover for description)

Select/
Deselect

01 AGRICULTURAL/ANIMAL/PLANT/VETERINARY SCIENCE AND RELATED FIELDS.

01.00 Agriculture, General.

01.0000: Agriculture, General.

01.01 Agricultural Business and Management.

Select All Most Used

01.0101: Agricultural Business and Management, General.

01.0104: Farm/Farm and Ranch Management.

01.0106: Agricultural Business Technology/Technician.

INSTRUCTIONAL COURSELOAD: FALL 2021

Full-time Equivalency (FTE) and Student Credit Hours (SCH) for the following items is based on your Fall 2021 term only.

	FACULTY/INSTRUCTOR TOTAL FTE ⓘ	FALL 2021 SCH ⓘ
Full-time Instructional Faculty	<input type="text"/>	<input type="text"/>
Part-time Instructional Faculty	<input type="text"/>	<input type="text"/>
Other Full-time Employees	<input type="text"/>	<input type="text"/>

Total Number of Course Sections

DIRECT INSTRUCTIONAL COST DATA: FISCAL YEAR 2021-2022

All expenditure data for the following items is based on your Fiscal Year 2021-2022, and should reflect actual expenditures not budgeted amounts.

	INSTRUCTIONAL FACULTY ⓘ	ADMINISTRATIVE & SUPPORT STAFF ⓘ
Salary Expenditures	\$ <input type="text"/>	\$ <input type="text"/>
Benefits Expenditures	\$ <input type="text"/>	\$ <input type="text"/>

NON-PERSONNEL PROGRAM COSTS: FISCAL YEAR 2021-2022

Non-personnel program costs are based on your Fiscal Year 2021-2022,

Non-personnel Program Costs \$

STUDENT CREDIT HOUR (SCH): FISCAL YEAR 2021-2022

Student Credit Hours (SCH) for the following item is based on your Fiscal Year 2021-2022, and should include all SCH delivered in that period.

Total Student Credit Hours

Student & Admin Services



STUDENT SERVICES
Benchmark Project



ADMINISTRATIVE SERVICES
Benchmark Project

Data Entry

2022 ENROLLMENT & INCOMING STUDENT SERVICES AND PROGRAMS STAFFING & BUDGETS

STAFF FTE

	ON YOUR CAMPUS(ES)	SYSTEM/CONSO
Admissions FTE	<input type="text"/>	<input type="text"/>
Financial Aid FTE	<input type="text"/>	<input type="text"/>
Registrar FTE	<input type="text"/>	<input type="text"/>
Visitor Information FTE	<input type="text"/>	<input type="text"/>
Orientation FTE	<input type="text"/>	<input type="text"/>

PERSONNEL BUDGETS

	ON YOUR CAMPUS(ES)	SYSTEM/CONSORTIUM
Admissions Personnel Budget	\$ <input type="text"/>	\$ <input type="text"/>
Financial Aid Personnel Budget	\$ <input type="text"/>	\$ <input type="text"/>

NON-PERSONNEL BUDGETS

	ON YOUR CAMPUS(ES)	OUTSOURCED
Admissions Non-Personnel Budget	\$ <input type="text"/>	\$ <input type="text"/>
Financial Aid Non-Personnel Budget	\$ <input type="text"/>	\$ <input type="text"/>

2022 ADMINISTRATIVE SERVICES STAFFING & BUDGETS

	ON YOUR CAMPUS(ES)	SYSTEM/CONSORTIUM
Business & Financial Services FTE	<input type="text"/>	<input type="text"/>
Advancement FTE	<input type="text"/>	<input type="text"/>
Grants Office/Research Services FTE	<input type="text"/>	<input type="text"/>
Human Resources FTE	<input type="text"/>	<input type="text"/>
Institutional Effectiveness FTE	<input type="text"/>	<input type="text"/>
Information Technology FTE	<input type="text"/>	<input type="text"/>
Marketing and Communications FTE	<input type="text"/>	<input type="text"/>
Physical Plant FTE	<input type="text"/>	<input type="text"/>
Security and Police FTE	<input type="text"/>	<input type="text"/>
Library FTE	<input type="text"/>	<input type="text"/>

OTC Data Collection Experience

The image illustrates a data collection and analysis workflow. At the top, a Power BI interface shows a query for 'Table.Group' with columns for CIPCodeFinal, Department, and ProRatedCost. Below this, a Power BI visualization displays a bar chart of data. In the center, an Excel spreadsheet titled 'Cost and Productivity Module Data For Upload' is shown, containing a table with columns for CIP Code, FT Faculty FTE, FT Faculty Credit Hours, PT Faculty FTE, PT Faculty Credit Hours, Other FT FTE, Other FT Credit Hours, Course Sections, Instructional Costs, and Admin/Sup. The table lists data for various CIP codes from 01.0000 to 40.0501. On the right, a Power BI 'Filters' pane is visible, showing filters for CIPCode and Department. At the bottom, a navigation bar includes 'Scratch', 'Files To Submit', 'Cost & Productivity Module', 'Institutional Characteristics', 'Form 1', and 'Form 20A'.

CIP Code	Fall 2020 Full-time Instructional Faculty FTE	Fall 2020 Full-time Instructional Faculty Credit Hours	Fall 2021 SCH	Fall 2020 Part-time Instructional Faculty FTE	Fall 2020 Part-time Instructional Faculty Credit Hours	Fall 2021 SCH	Other Full-time Employee FTE	Other Full-time Employee Credit Hours	Fall 2021 SCH	Total Number of Course Sections	Instructional Expenditures - Salaries & Benefits Combined
01.0000											\$241,531.60
02.0000											\$219,931.81
03.0000											\$375,500.88
04.0000											\$81,368.84
05.0000											\$176,393.78
06.0000											\$1,388,615.49
07.0000											\$205,331.67
08.0000											\$100,875.75
09.0000											\$166,145.51
10.0000											\$321,867.54
11.0000											\$162,076.45
12.0000											\$284,668.62
13.0000											\$9,772.62
14.0000											\$19,490.00
15.0000											\$148,466.55
16.0000											\$236,900.35
17.0000											\$903,358.49
18.0000											\$244,756.15
19.0000											\$590,183.50
20.0000											\$262,097.97
21.0000											\$180,573.35
22.0000											\$115,406.21
23.0000											\$249,007.78
24.0000											\$532,519.64
25.0000											\$337,442.67
26.0000											\$156,274.28
27.0000											
28.0000											
29.0000											
30.0000											
31.0000											
32.0000											
33.0000											
34.0000											
35.0000											
36.0000											
37.0000											
38.0000											
39.0000											
40.0501											

Cost & Productivity Report Sample

CIP Code	Academic Discipline	Number of Disciplines Reported	Faculty Cost		Admin Cost		Personnel Cost		Non-Personnel Cost		Total Cost	
			Your Institution	National Means	Your Institution	National Means	Your Institution	National Means	Your Institution	National Means	Your Institution	National Means
01	AGRICULTURAL/ANIMAL... SCIENCE AND RELATED FIELDS.	58	\$250	\$196	\$8	\$20	\$258	\$206	\$6	\$15	\$265	\$211
01.03	Agricultural Production Operations.	6	\$132	\$155	\$19	\$7	\$151	\$162	\$0	\$5	\$151	\$167
01.0308	<i>Agroecology and Sustainable Agriculture.</i>	1	\$132	n/a	\$19	n/a	\$151	n/a	\$0	n/a	\$151	n/a
01.06	Applied Horticulture and Horticultural Business Services.	12	\$250	\$263	\$8	\$43	\$258	\$289	\$6	\$26	\$265	\$288
01.0601	<i>Applied Horticulture/Horticulture Operations, General.</i>	4	\$145	n/a	\$8	n/a	\$153	n/a	\$17	n/a	\$170	n/a
01.0608	<i>Floriculture/Floristry Operations and Management.</i>	1	\$250									
03	NATURAL RESOURCES AND CONSERVATION.	14	\$123									
03.01	Natural Resources Conservation and Research.	10	\$123									

CIP Code	Academic Discipline	Number of Disciplines Reported	Percent of Student Credit Hours Taught by (Fall 2020)						Class Size (Student Faculty Ratio)	
			Full-Time Faculty		Part-Time Faculty		Other Full-Time Employees		Your Institution	National Means
			Your Institution	National Means	Your Institution	National Means	Your Institution	National Means		
01	AGRICULTURAL/ANIMAL/PLANT/VE... SCIENCE AND RELATED FIELDS.	59	0%	61%	100%	36%	0%	3%	11	7
01.03	Agricultural Production Operations.	6	0%	75%	100%	25%	0%	0%	17	9
01.0308	<i>Agroecology and Sustainable Agriculture.</i>	1	0%	n/a	100%	n/a	0%	n/a	17	n/a
01.06	Applied Horticulture and Horticultural Business Services.	12	0%	47%	100%	53%	0%	0%	11	9
01.0601	<i>Applied Horticulture/Horticulture Operations, General.</i>	4	40%	n/a	60%	n/a	0%	n/a	18	n/a
01.0608	<i>Floriculture/Floristry Operations and Management.</i>	1	0%	n/a	100%	n/a	0%	n/a	11	n/a
03	NATURAL RESOURCES AND CONSERVATION.	14	15%	50%	85%	50%	0%	0%	18	17
03.01	Natural Resources Conservation and Research.	10	15%	41%	85%	59%	0%	0%	18	18

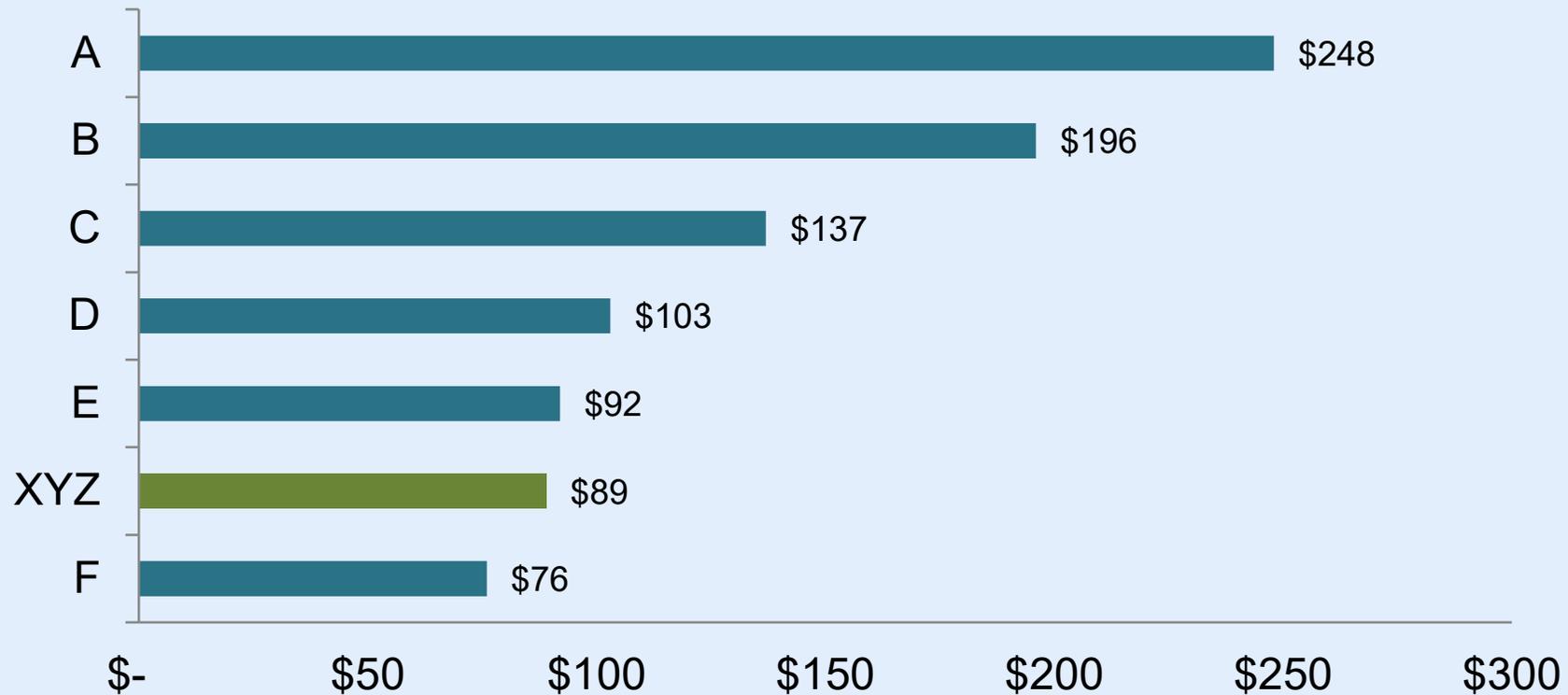
Division Report Sample

			Percent of Student Credit Hours Taught by (Fall 2018)										
			Instructional Costs Per Student Credit Hour (FY 2018-2019)		Full-Time Faculty ⓘ		Part-Time Faculty ⓘ		Other Full-Time Employees ⓘ		Student Faculty Ratio ⓘ (Fall 2018)		
Division	Number of Disciplines Reported	Your Institution	National Mean	Your Institution	National Mean	Your Institution	National Mean	Your Institution	National Mean	Your Institution	National Mean	Your Institution	National Mean
+	Health Public Safety & Wellness	143	\$401	\$269	75%	70%	25%	28%	0%	2%	19	15	
+	Science and Mathematics	182	\$186	\$123	72%	62%	25%	36%	3%	2%	15	16	
-	Communications/English & Journalism	65	\$200	\$122	64%	59%	36%	40%	0%	1%	13	15	
	09.0101: Speech Communication and Rhetoric.	12	\$168	\$104	50%	56%	50%	43%	0%	1%	18	17	
	09.0401: Journalism.	13	\$187	\$215	40%	47%	60%	53%	0%	0%	12	12	
	16.0101: Foreign Languages and Literatures, General.	7	\$191	\$132	63%	51%	37%	47%	0%	2%	5	10	

Cost per Credit Hour

Math, General

XYZ College and Peer Institutions



Admin Services Cost & Productivity Report

	Admin Unit	N	Staff Personnel Cost		Non-Personnel Cost		Total Cost		% Outsourced		Student FTE:Staff Ratio	
			Your Institution	National Means	Your Institution	National Means	Your Institution	National Means	Your Institution	National Means	Your Institution	National Means
+	Business & Financial Services	7	\$30	\$34	\$3	\$3	\$33	\$24	0.00%	0.03%	588	328
+	Advancement	6	\$13	\$14	\$1	\$1	\$14	\$7	0.00%	0.00%	-	1,163
+	Grants Office/Research Services	6	\$10	\$2	\$0	\$0	\$11	\$3	0.00%	0.00%	471	2,778
+	Human Resources	7	\$19	\$13	\$7	\$4	\$26	\$18	0.00%	0.06%	314	661
+	Institutional Effectiveness	8	\$21	\$9	\$2	\$1	\$23	\$13	0.00%	1.46%	314	600
+	Information Technology	7	\$52	\$29	\$30	\$37	\$82	\$61	0.00%	3.03%	118	226
+	Marketing and Communications	7	\$19	\$12	\$17	\$13	\$36	\$25	0.00%	0.00%	294	703
+	Physical Plant	7	\$49	\$33	\$77	\$43	\$125	\$82	0.00%	0.58%	784	275
+	Security and Police	6	\$11	\$8	\$1	\$3	\$12	\$17	0.00%	0.00%	1,177	1,482
+	Library	6	\$6	\$9	\$2	\$5	\$8	\$16	0.00%	0.86%	471	536

Admin Services National Report

Process & Outcome Measures

Human Resources									
Human Resources FTE per Total Faculty & Staff	135	33%	6	83	96	135	190	297	
Human Resources Total Budget Per Enrollment	\$222	60%	5	\$43	\$72	\$134	\$228	\$234	
Total Vacancies (excluding student) Per HR FTE	7	-	4	N/A	N/A	N/A	N/A	N/A	
Success Rate for Faculty Vacancies	95%	86%	7	60%	67%	88%	91%	95%	
Success Rate for Staff Vacancies	92%	50%	6	67%	71%	89%	100%	100%	
Success Rate for Administrators Vacancies	89%	17%	6	84%	88%	100%	100%	100%	
Promotion Rate for Internal Candidates	15.69%	29%	7	2.50%	8.93%	18.18%	39.25%	52.94%	
Reclassification Rate	28.57%	-	4	N/A	N/A	N/A	N/A	N/A	
% of Student Workers of Total Employees	85%	20%	5	74%	80%	93%	95%	97%	
Total Student Vacancies Per HR FTE	0.00	-	4	N/A	N/A	N/A	N/A	N/A	
Success Rate for Student Vacancies	100.00%	83%	6	-22.73%	-5.68%	23.29%	100.00%	100.00%	

Student Services Cost & Productivity Report

	Student Services Program	N	Staff Personnel Cost		Non-Personnel Cost		Total Cost		% Outsourced		Student FTE:Staff Ratio	
			Your Institution	National Means	Your Institution	National Means	Your Institution	National Means	Your Institution	National Means	Your Institution	National Means
	Auxiliary Services											
+	Campus Bookstore	6	\$8	\$3	-	\$0	\$41	\$15	0.00%	0.00%	588	2,747
+	Dining Services	5	\$19	\$5	-	\$0	\$31	\$8	0.00%	0.00%	96	2,248
+	<i>Parking</i>	3	-	<i>n/a</i>	-	<i>n/a</i>	-	<i>n/a</i>	-	<i>n/a</i>	-	<i>n/a</i>
+	Housing and Residential Life	5	\$2	\$3	-	\$0	\$33	\$8	0.00%	0.00%	2,353	1,124
+	<i>College Unions</i>	2	-	<i>n/a</i>	-	<i>n/a</i>	-	<i>n/a</i>	-	<i>n/a</i>	-	<i>n/a</i>
	Enrollment & Incoming Student Services and Programs											
+	Admissions	6	\$24	\$14	-	\$0	\$25	\$14	0.00%	0.00%	248	528
+	Financial Aid	6	\$13	\$12	-	\$0	\$14	\$12	0.00%	0.00%	314	459
+	Registrar	7	\$8	\$10	-	\$0	\$8	\$10	0.00%	0.00%	588	656
+	<i>Campus Info and Visitor Serv</i>	1	-	<i>n/a</i>	-	<i>n/a</i>	-	<i>n/a</i>	-	<i>n/a</i>	-	<i>n/a</i>
+	<i>Orientation</i>	2	-	<i>n/a</i>	-	<i>n/a</i>	-	<i>n/a</i>	-	<i>n/a</i>	-	<i>n/a</i>
+	<i>Parent and Family Programs</i>	1	-	<i>n/a</i>	-	<i>n/a</i>	-	<i>n/a</i>	-	<i>n/a</i>	-	<i>n/a</i>
+	Testing	6	\$4	\$3	-	\$0	\$4	\$3	0.00%	0.00%	2,353	2,207

Student Services National Report

Process & Outcome Measures

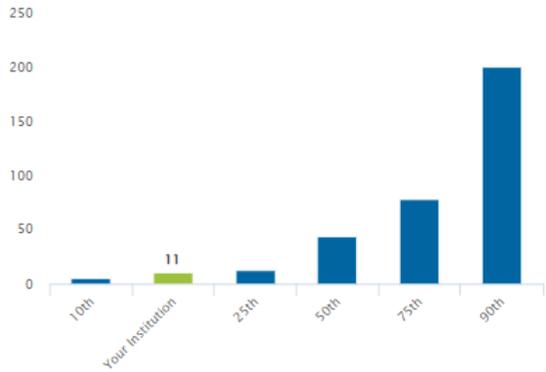
Admissions									
Student Headcount per Admissions Staff FTE	438	17%	6	394	427	741	1,515	2,683	
Admissions Total Budget per Student Headcount	208	-	4	N/A	N/A	N/A	N/A	N/A	
Prospect to Applicant Conversion Rate	41.86%	67%	6	10.51%	11.30%	18.83%	45.35%	55.84%	
First Time College Student Yield Rate	50.83%	40%	5	41.74%	43.60%	50.83%	77.61%	100.00%	
Transfer Student Yield Rate	45.79%	-	4	N/A	N/A	N/A	N/A	N/A	
Outreach Events Per Prospective Students	0	<1%	6	0	0	0	2	2	

Custom Report Sample

STAFF/BUDGET

View Edit Build Print Copy

Total Faculty & Staff FTE per Research Services FTE

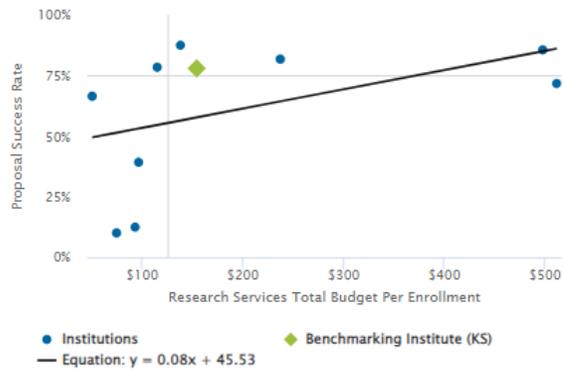


Research Services Budget per Student Enrollment



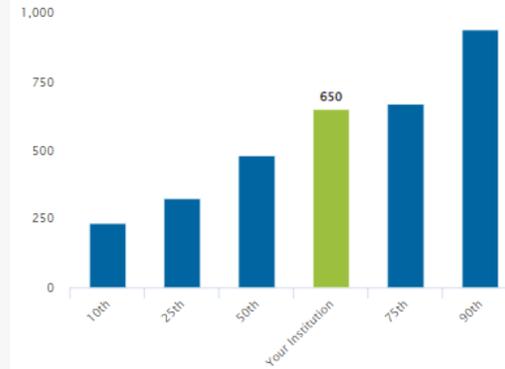
Proposal Success Rate

per Research Services Budget per Enrollment



ADVISING STAFFING IMPACT ON GRAD RATES/EMPLOYMENT

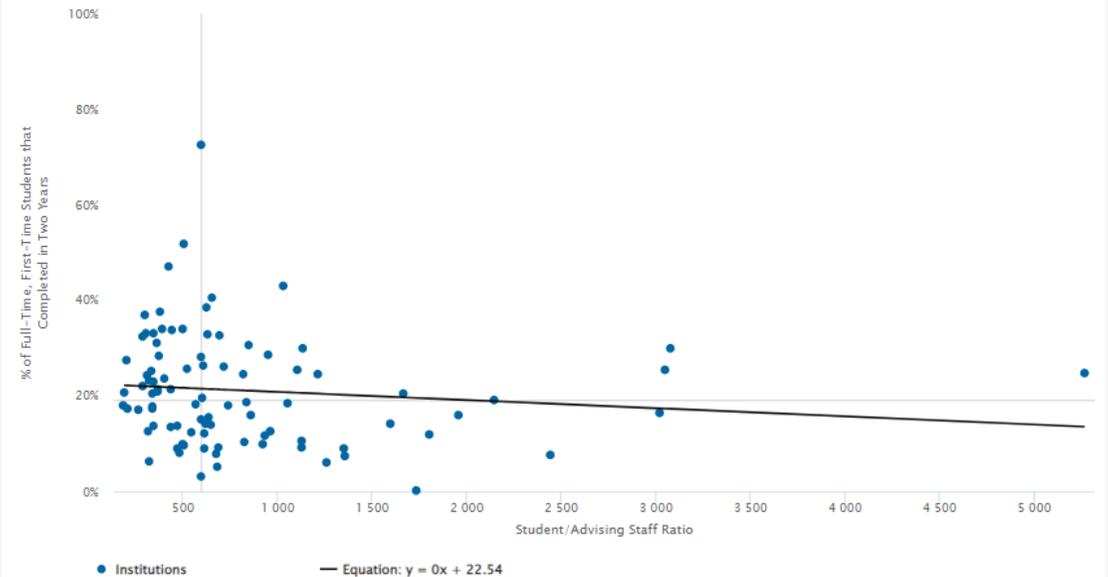
Student / Advising FTE



% of Full-Time, First-Time Students that Completed in Two Years



Student/Advising Staff Ratio and % of Full-Time, First-Time Students that Completed in Two Years



Cost and Productivity Project Data Usage Example at XYZ College

Cost & Productivity/Program

without Cost & Productivity Project comparison data

<i>PTA program</i>						
<i>Faculty</i>	<i>SCH/Fall</i>	<i>SCH/Spring</i>	<i>Total SCH</i>	<i>Salary</i>	<i>Benefits</i>	<i>Individual ROI</i>
Faculty	107	85	192	\$ 110,418.95	\$ 44,830.10	18.2%
Faculty	119	310	429	\$ 92,979.22	\$ 37,749.56	48.2%
Faculty	110	94	204	\$ 44,560.12	\$ 18,091.41	47.9%
PT-Faculty						
Totals						
	336	489	825	\$ 247,958.30	\$100,671.07	
Tuition Revenue = SCH x \$147.00			\$ 121,275.00			
Faculty Costs (Salary + Benefits)			\$ 348,629.36			
FT Overloads + benefits			\$ -			
Clinicals & adjuncts+benefits			\$ -			
Other than Personnel (Supplies)			\$ 5,580.00			
Production cost/SCH			\$ 429.34			
Margin (Revenue-Costs) =			\$(232,934.36)			
ROI/% Efficiency (Revenue/Costs) =			34.24%			

Cost & Productivity/Program

with Cost & Productivity Project comparison data

<i>PTA program</i>						
<i>Faculty</i>	<i>SCH/Fall</i>	<i>SCH/Spring</i>	<i>Total SCH</i>	<i>Salary</i>	<i>Benefits</i>	<i>Individual ROI</i>
Faculty	107	85	192	\$ 110,418.95	\$ 44,830.10	18.2%
Faculty	119	310	429	\$ 92,979.22	\$ 37,749.56	48.2%
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PT-Faculty						
Totals						
	336	489	825	\$ 247,958.30	\$100,671.07	
				C&PP Mean		
			SCC Summary Data		NCCBP Mean	
Tuition Revenue = SCH x \$147.00			\$ 121,275.00			
Faculty Costs (Salary + Benefits)			\$ 348,629.36			
FT Overloads + benefits			\$ -			
Clinicals & adjuncts+benefits			\$ -			
Other than Personnel (Supplies)			\$ 5,580.00			
Percentage of SCH taught by FT			100%		73%	
Percentage of SCH taught by PT			0%		27%	
SCH taught by FT faculty			112		139	
SCH taught by PT faculty			0		247	
Student Faculty Ratio			7/1		15/1	
Instructional cost/SCH			\$ 429.34		\$ 283.00	
Margin (Revenue-Costs) =			\$(232,934.36)			
ROI/% Efficiency (Revenue/Costs) =			34.24%			

OTC CPP Analysis/Usage

Staffing and expense ratios are part of the college's program review process

OTC used program cost data to create a three-tiered differential tuition model

<u>Required Tuition</u>			
	Tier I	Tier II	Tier III
In-District Tuition (per credit hour)	\$128.00	\$137.00	\$149.00
Out-of-District Tuition (per credit hour)	\$188.00	\$193.00	\$205.00
Out-of-State Tuition (per credit hour)	\$240.00	\$245.00	\$259.00



Questions?