Campus Finance Committee Meeting

Date: Thursday, February 24, 2022
Time: 9am

In Attendance

Elizabeth Watkins, Gerry Bomotti, Anil Deolalikar, Brian Haynes, Christopher Lynch, Dana Simmons, Daryle Williams, Maria Aldana (sub for Deborah Deas), Jason Stajich, Jeff Girod, Jennifer Brown, Johnny Cruz, Kathryn Uhrich, Louie Rodriguez, Mariam Lam, Melanie Wu, Rodolfo Torres, Shaun Bowler, Yunzeng Wang, Stephanie Flores (committee support) Scott Heil (guest) and Ken Baerenklau (guest)

Lottery Funds - Liz

Annually there is an allocation from the state from the State Lottery funds based on a 1984 law that allocated funds to public institutions of higher education for use in direct support of instruction. Deans have been meeting on the use of the funds as the campus has accumulated almost $24M in one-time funds and there is about $2.5M in on-going funds. Considering the use of some of the on-going funds for gaps in Undergraduate Education and asking Deans to come up with ways to spend the one-time funds.

Here is a high-level overview:

- $3.6M to the colleges and schools as block allocations (calculated as 50% on equal distribution and 50% based on Method 2A credit weighting) as follows: BCOE=$650K, CHASS and CNAS=$850K, BUS=$350K, and SOE, SOM and SPP=$300K each
- $4.5M to the Library
    - $2.5M for collections
    - $1M compact shelving in Rivera to hold collections for next 10 years and free up space for other instructional uses
    - $1M to enhance learning spaces in Rivera and Orbach
- $370K to UNEX
- $13K to Grad Div
- $5.5M reserved for instructional equipment for new undergrad teaching & learning building
- $10M left – “deferred maintenance” for instructional costs – labs, equipment for teaching (can’t be used for capital, but minor renovations directly related to the installation of equipment would be allowable) – deans will work with department chairs and associate deans to come up with proposals for these larger spends

An idea for a portion of the $10M is a recording studio/media lab. Several units have a similar need for space and equipment (academic departments, Library, UNEX, Athletics, etc.) and so it seems like a good idea to create shared space and make one substantial investment. As an example, being a member of the Big West conference, UCR is required to produce 60 competitions for ESPN+. There was a space in the basement of Sproul that was used as a media studio and there is a media library in INTS.

Credit Weight Modeling – Liz, Gerry, Scott

Handouts attached.

Follow-up on the request for interdepartmental and intercollege teaching provided. Not a big percentage of FTE affected overall. SOE has the highest percentage.

The student FTE follows the home department of the faculty member teaching. If there is a joint appointment with split salary or a cross-listed, then it's prorated as appropriate.

Follow-up on the modeling of UCR data using Method 2a (regression modeling to adjust costs to match attributes similar to UCR mixes of grad students, Student-Faculty FTE) and Method 3. Method 2a is a refined version of Method 2 and with the refinements, we were able to identify comparative data for SPP as well. The weight changes between Method 2 and 2a were relatively minor for all units except SOE, so a more in-depth explanation was provided.

This modeling is just that a model and not intended to be a policy recommendation. This Delaware Study dataset is the best we could find to compare costs at a national level.

The Delaware Study looks at all instructional costs, but our budget model only allocates funding for core. So, another line was added at the bottom of the method chart to show the weights on core instructional budgets.

The incremental tuition allocation to Schools and Colleges since the new budget model started (5 years) is only about 3% of the overall core budget. We don't have a full RCM model, but one focused on one rather small area of the budget. The much larger portion of our budget allocation is incrementally increased every year, with the center covering 100% of fixed cost increases.

Credit Weight Modeling discussion

What are the policy drivers for workload in the schools and colleges? This study identifies workload is within the norm of peers with the exception of CNAS and SPP (the reasons for this have not been studied, but clearly the relatively small size of SPP is a driver for their outcome).

Should we differentially invest in various schools and colleges? The tuition allocations shouldn't be weighted "1" across the board, as we know that is not accurate, but the total revenue to the Schools and Colleges is not sufficient to support major strategic initiatives. The current budget model is not as much of an issue as the total revenue flowing through the model.

Concerns about the funding changes to smaller units – even though the dollar amount is smaller, the impact could be more significant for small budgets.

Need to think about the impacts of any changes and the behaviors that will be incentivized by money. What will be the programs likely affected with a changing the weights? What about programs with missions specific to the needs of our community (e.g., teacher ed)?

Closing comments - Liz

Decision Points

1. Do we want to adjust the existing base (subvention) in the schools and colleges? Consensus is: not at this time. We can revisit when we revisit the budget model again in 5 years.

2. Do we want to use any of this data to make tweaks to the enrollment growth tuition allocation which is about 3% of our total core budget annually acknowledging that every student FTE is not equal to instruct? Consensus to defer decision to next meeting.

Next Meeting

Thursday, March 10, 2022 at 9 am

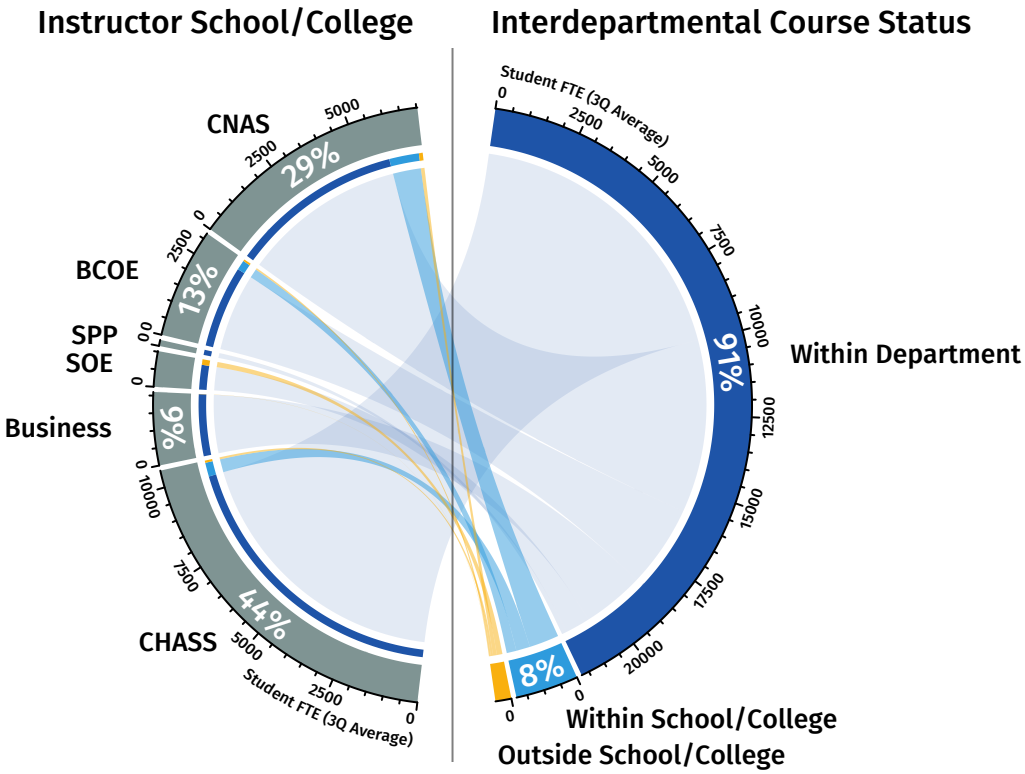
Delaware Cost Study — AY 2019-20
Interdepartmental Student FTE Allocation by Instructor School/College

Instructor School / College	Interdepartmental Course Status	Student FTE (3 Quarter Average) Undergrad	Graduate	Total	% of School / College Total
BCOE					
	Within Department	1,876	913	2,789	87.7%
	Within School/College	175	156	331	10.4%
	Outside School/College	35	24	60	1.9%
	Total	2,086	1,094	3,180	100.0%
CHASS					
	Within Department	9,096	848	9,944	94.8%
	Within School/College	380	92	473	4.5%
	Outside School/College	47	28	75	0.7%
	Total	9,524	968	10,492	100.0%
CNAS					
	Within Department	4,983	905	5,887	83.8%
	Within School/College	790	222	1,012	14.4%
	Outside School/College	102	28	130	1.8%
	Total	5,874	1,155	7,029	100.0%
Business					
	Within Department	1,639	459	2,098	99.7%
	Outside School/College	7	0	7	0.3%
	Total	1,646	459	2,105	100.0%
SOE					
	Within Department	453	383	836	81.7%
	Outside School/College	187	0	187	18.3%
	Total	640	383	1,023	100.0%
SPP					
	Within Department	125	50	175	99.6%
	Outside School/College	0	1	1	0.4%
	Total	125	51	176	100.0%
Overall					
	Within Department	18,172	3,557	21,729	90.5%
	Within School/College	1,345	471	1,816	7.6%
	Outside School/College	378	81	459	1.9%
	Total	19,895	4,109	24,004	100.0%

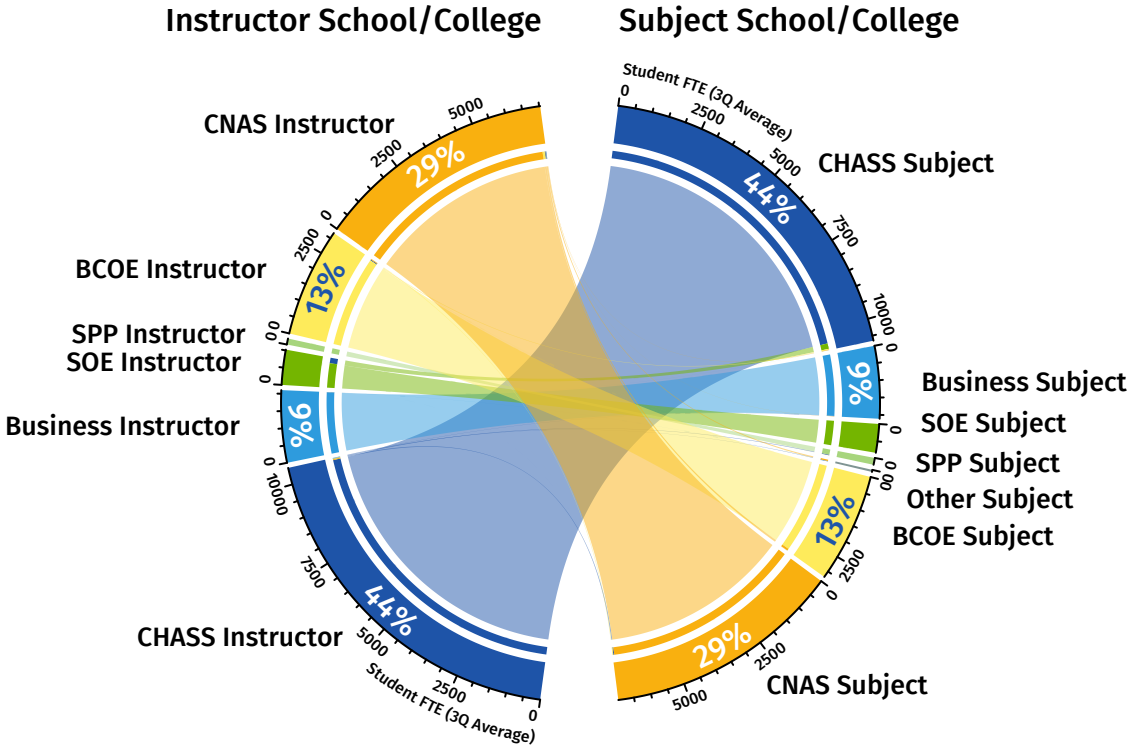
Delaware Cost Study — AY 2019-20
Student FTE Allocation by Instructor and Subject School/College

Instructor School / College	Subject School / College	Student FTE (3 Quarter Average) Undergrad	Graduate	Total
BCOE	BCOE	2,051	1,069	3,120
BCOE	CHASS	30	0	30
BCOE	CNAS	0	24	25
BCOE	SPP	3	0	3
BCOE	Other	2	0	2
CHASS	CHASS	9,476	940	10,416
CHASS	CNAS	13	19	32
CHASS	SPP	13	9	22
CHASS	Other	12	0	12
CHASS	SB	9	0	9
CNAS	CNAS	5,772	1,127	6,900
CNAS	BCOE	45	23	68
CNAS	Other	39	4	43
CNAS	CHASS	11	1	12
CNAS	SB	6	0	6
SOE	SOE	453	383	836
SOE	CHASS	187	0	187
SB	SB	1,639	459	2,098
SB	Other	4	0	4
SB	CHASS	3	0	3
SB	CNAS	1	0	1
SPP	SPP	125	50	175
SPP	BCOE	0	0	0
SPP	CHASS	0	0	0
SPP	CNAS	0	0	0

Delaware Cost Study — AY 2019-20
Interdepartmental Student FTE Allocation by Instructor School/College



Delaware Cost Study — AY 2019-20
Student FTE Allocation by Instructor and Subject School/College



Comparison of Peer Institution Instructional Cost Estimation Methods

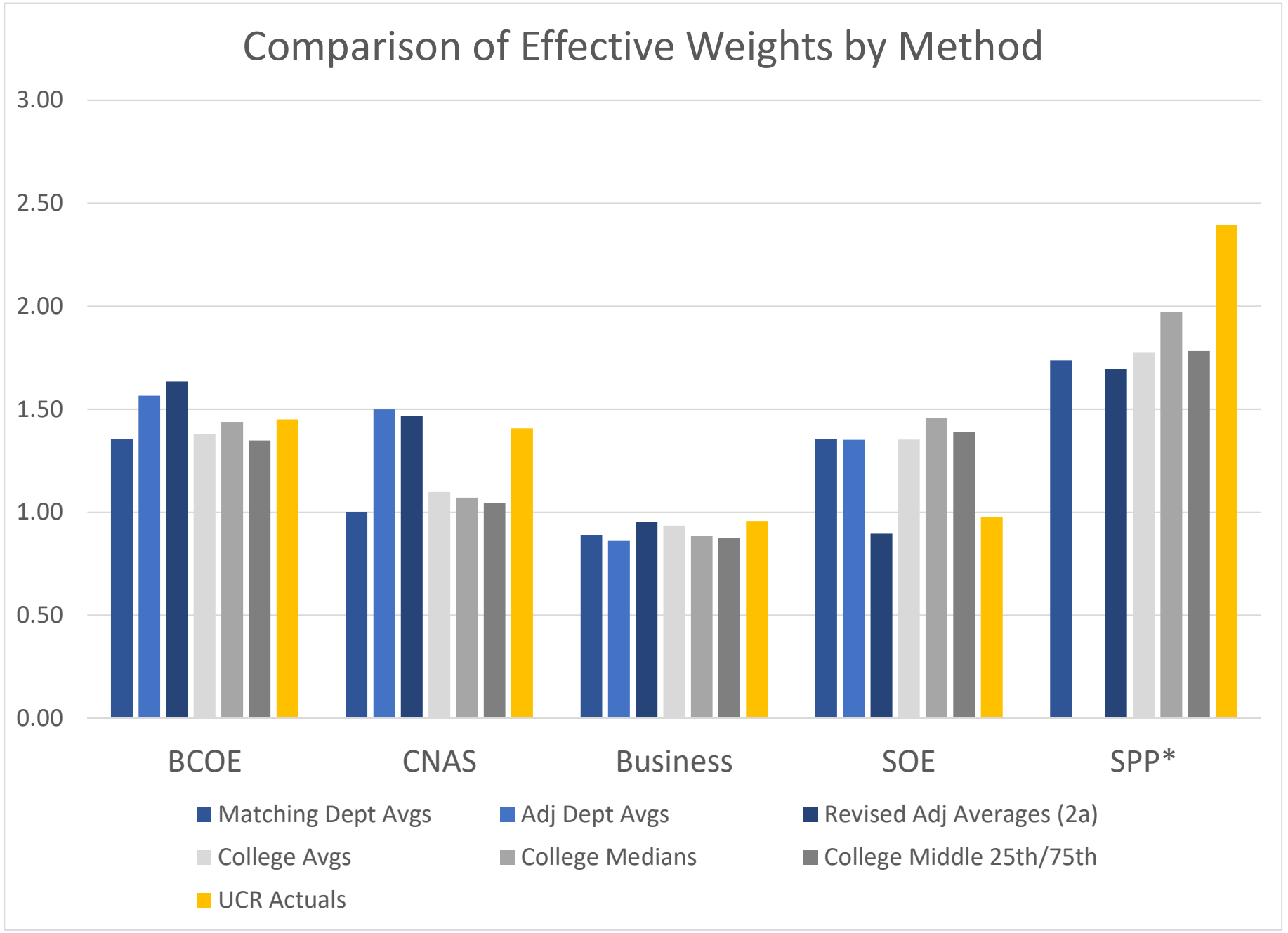
Updated 2/22/2022

			Estimated Cost Per Student FTE						Relative Weight					
	Peer Estimation Method	Description	CHASS	BCOE	CNAS	Business	SOE	SPP*	CHASS	BCOE	CNAS	Business	SOE	SPP*
1	**Department averages** by best-matching CIP	Every department is matched, supplementing R2s and/or broader disciplines for small departments. Small and specialized departments may not be adequately matched.	$8,490	$11,499	$8,486	$7,548	$11,512	$14,742	1.00	1.35	1.00	0.89	1.36	1.74
2	**Adjusted department averages** (replaced by 2a)	Same as above, but modeled to match UCR program attributes	$7,447	$11,656	$11,163	$6,425	$10,062		1.00	1.57	1.50	0.86	1.35	
2a	**Regression-adjusted college-focused averages** for all related CIPs	Instead of trying for 1:1 matches on department, this option pulls together families of disciplines that are broadly similar to those in each UCR school/college. Peer estimates are then adjusted using a model that includes program size, % tenure-track faculty, and student-faculty ratio.	$7,329	$11,978	$10,764	$6,974	$6,579	$12,420	1.00	1.63	1.47	0.95	0.90	1.69
3	**College-focused averages** for all related CIPs	The same discipline-group matching strategy as in 2a, but no adjustments are made to make the peer attributes more like UCR's.	$8,514	$11,755	$9,346	$7,952	$11,512	$15,101	1.00	1.38	1.10	0.93	1.35	1.77
4	**College-focused medians** by best-matching CIP	Similar to the college-focused method, only using the median rather than the average in case any peers have extreme values that would pull the average much higher or lower.	$7,771	$11,175	$8,315	$6,874	$11,331	$15,315	1.00	1.44	1.07	0.88	1.46	1.97
5	**College-focused midpoint between 25th and 75th percentile** of peers in best-matching CIP	Similar to the medians method, but based on the interquartile range to better reflect what is typical for the middle 50% of peers.	$8,277	$11,155	$8,646	$7,229	$11,500	$14,754	1.00	1.35	1.04	0.87	1.39	1.78
		UCR Total Instructional Cost	**$7,603**	**$11,027**	**$10,693**	**$7,273**	**$7,433**	**$18,203**	**1.00**	**1.45**	**1.41**	**0.96**	**0.98**	**2.39**
		UCR Core Instructional Budget per Student FTE	**$7,510**	**$9,095**	**$9,141**	**$5,712**	**$7,311**	**$16,427**	**1.00**	**1.21**	**1.22**	**0.76**	**0.97**	**2.19**

All data are based on the Delaware Cost Study for the 2019-20 academic year. The peer list consists of the 20 best-matching participating R1 universities. For SPP and SOE, all participating R1 and R2 universities were included in the peer group due to small samples. All methods use a weighted average based on UCR student FTE to arrive at the college/school total.

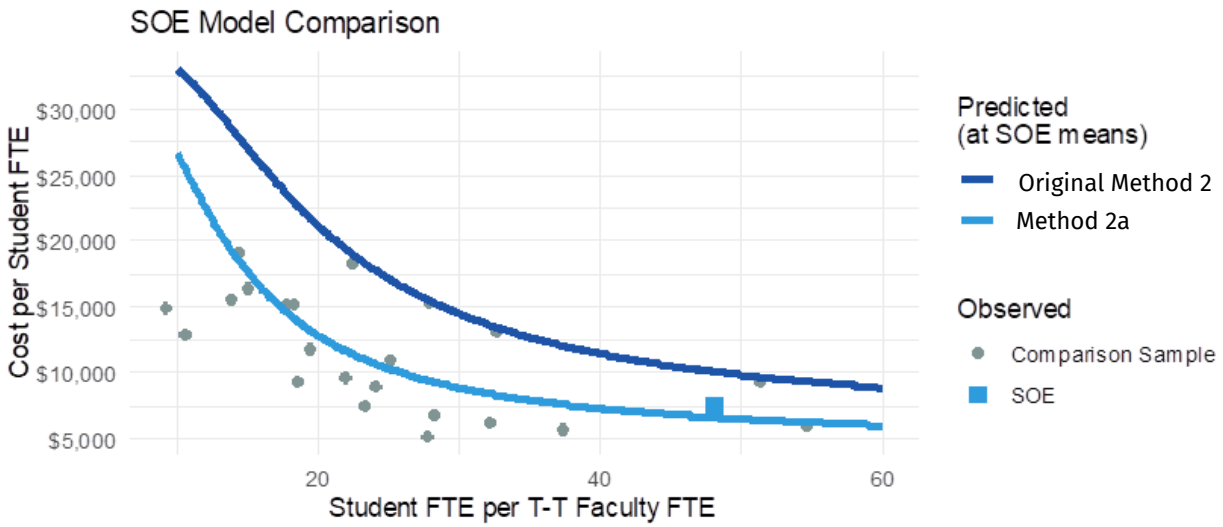
*Some of the methods could not be replicated for SPP due to the small sample of institutions in the peer data source.

The shaded rows are the methods chosen to simulate their effects on recent college/school budgets.


Comparison of Effective Weights by Method
3.00
2.50
2.00
1.50
1.00
0.50
0.00
BCOE
CNAS
Business
SOE
SPP*
Matching Dept Avgs
Adj Dept Avgs
Revised Adj Averages (2a)
College Avgs
College Medians
College Middle 25th/75th
UCR Actuals

APPENDIX – Effects of Model Revision on the School of Education Peer Estimate

SOE had the greatest change in estimated peer costs when Institutional Research updated the regression-adjusted cost model. In the original Method 2, SOE's peer institutions were estimated cost $10,062 per student FTE, which represented a ratio of 1.35 in comparison to the CHASS peer cost estimate. However, while revising the model, IR determined that a more accurate prediction was possible. Below is an illustration of how the two models differ.



As the plot suggests, the prediction from Method 2a (the lighter blue line) comes much closer to more of the observed peer values. By contrast, the original model appeared to be overly influenced by a few higher-cost programs and overestimated the costs for most institutions in the sample. In terms of formal fit, the Method 2a model had an r^2 of 0.48, compared with 0.35 in the original Method 2 model.

The revised model predicts that an education program with SOE's characteristics (percentage undergraduate, percentage tenure-track faculty, and student-faculty ratio) would carry an average cost of $6,579 per student FTE based on 22 R1/R2 peer institutions. This had a ratio of 0.90 relative to CHASS.

UCR Institutional Research
22 February 2022

Hypothetical Application of Peer Weights to Tuition Allocations

The following analysis considers the cumulative effects of applying peer cost weighting methods on the cumulative tuition budget allocations to the colleges and schools. The figures represent the net allocations from all inputs (workload FTE, majors, NRT, etc.) after deducting the service augmentation. This is for information only and is not a policy recommendation.

Cumulative Tuition Allocations, FY2017 to FY2022 (estimated)

	BCOE	CHASS	CNAS	SOE	Business	SPP	Total
Current Weight	1.0	1.0	1.0	1.0	1.0	1.0	
Actual Tuition Allocations, 2017-2022	6,581,531	2,168,588	5,446,717	2,239,845	2,618,164	883,510	19,938,355

Allocation by Method 2a: Regression-adjusted peer cost weights

	BCOE	CHASS	CNAS	SOE	Business	SPP	Total
Peer Cost Ratio	1.63	1.00	1.47	0.90	0.95	1.69	
Predicted Allocation	7,963,616	1,605,863	5,924,994	1,489,449	1,845,717	1,108,716	19,938,355
Difference vs. Actual	1,382,085	-562,725	478,277	-750,396	-772,447	225,206	

Allocation by Method 3: College-focused peer averages

	BCOE	CHASS	CNAS	SOE	Business	SPP	Total
Peer Cost Ratio	1.38	1.00	1.10	1.35	0.93	1.77	
Predicted Allocation	7,464,080	1,780,872	4,911,258	2,486,854	2,008,165	1,287,125	19,938,355
Difference vs. Actual	882,549	-387,716	-535,458	247,009	-609,999	403,615	

Source: UCR Institutional Research and Financial Planning & Analysis
22 Feburary 2022

Hypothetical Application of Peer Weights to Core Instructional Budgets

The following analysis considers the one-year effects of applying peer cost weighting methods on the entire core instructional budgets for FY 2019-20. This is for information only and is not a policy recommendation.

Two implementation methods are illustrated for each set of cost weights. The first applies the weights only to the final budget totals and does not directly reference inputs such as enrollment. The second option implements the weights as a function of total student FTE (undergraduate and graduate) during the budget year. The results can be quite different for the same set of weights.

Actual Core Instructional Budget, FY2020

	BCOE	CHASS	CNAS	SOE	Business	SPP	Total
Current Weight	1.0	1.0	1.0	1.0	1.0	1.0	
Actual Budget	28,917,406	78,795,725	64,255,941	7,478,702	12,022,823	2,890,171	194,360,767

Allocation by Method 2a: Regression-adjusted peer cost weights based on share of budget

	BCOE	CHASS	CNAS	SOE	Business	SPP	Total
Peer Cost Ratio	1.63	1.00	1.47	0.90	0.95	1.69	
Predicted Budget	37,715,887	62,894,925	75,343,889	5,360,626	9,136,005	3,909,434	194,360,767
Difference vs. Actual	8,798,482	-15,900,800	11,087,948	-2,118,076	-2,886,817	1,019,263	

Allocation by Method 2a: Regression-adjusted peer cost weights based on weighted student FTE

	BCOE	CHASS	CNAS	SOE	Business	SPP	Total
Peer Cost Ratio	1.63	1.00	1.47	0.90	0.95	1.69	
Predicted Budget	34,541,777	69,753,381	68,653,465	6,106,955	13,322,843	1,982,345	194,360,767
Difference vs. Actual	5,624,372	-9,042,344	4,397,525	-1,371,747	1,300,021	-907,826	

Allocation by Method 3: College-focused peer averages based on share of budget

	BCOE	CHASS	CNAS	SOE	Business	SPP	Total
Peer Cost Ratio	1.38	1.00	1.10	1.35	0.93	1.77	
Predicted Budget	35,975,600	70,983,547	63,558,065	9,108,733	10,115,989	4,618,832	194,360,767
Difference vs. Actual	7,058,195	-7,812,178	-697,875	1,630,031	-1,906,833	1,728,661	

Allocation by Method 3: College-focused peer averages based on weighted student FTE

	BCOE	CHASS	CNAS	SOE	Business	SPP	Total
Peer Cost Ratio	1.38	1.00	1.10	1.35	0.93	1.77	
Predicted Budget	32,497,128	77,646,867	57,121,773	10,234,904	14,550,085	2,310,011	194,360,767
Difference vs. Actual	3,579,722	-1,148,858	-7,134,168	2,756,201	2,527,262	-580,160	

Source: UCR Institutional Research and Financial Planning & Analysis
22 Feburary 2022