### RESOURCE ALLOCATION MODEL TASKFORCE

#### AGENDA

**March 10, 2017**

1:00 p.m. to 4:00 p.m.  
EVC, VPA - 115

1) Call to Order

2) Approval of March 10, 2017 Meeting Agenda

3) Approval of February 24, 2017 Meeting Minutes

4) Approval of March 3, 2017 Meeting Minutes

5) Simulation #7

6) Follow-up discussion to RAM Variables

7) Total Cost of Ownership

8) Differences between revenue model vs. cost based model

9) FTES to $$/DS

10) Build Next Agenda

11) Check out

12) Adjournment

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#### Parking Lot:

a) 2016 Principles for Budget Development

b) CTE Program Enrollment/Cost Data Confirmation/Reconciliation

**NOTE:** Request that students be briefed on RAM efforts through College Governance Process.

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<th>ACADEMIC SENATE</th>
<th>CSEA</th>
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<tbody>
<tr>
<td>Doug Smith, Vice Chancellor, Administrative Services - DS</td>
<td>Fabio Gonzalez, Academic Senate - DS</td>
<td>Dan Hawkins - DS</td>
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<td>Andrea Alexander, Vice President, Admin. Services - EVC</td>
<td>Eric Narveson, Academic Senate - EVC</td>
<td>Yesenia Ramirez - EVC</td>
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<td>Jorge Escobar, Vice President, Admin Services - SJCC</td>
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<td>Jesus Covarrubias, Academic Senate – SJCC</td>
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<td>MSC</td>
<td>Guillermo Castilla, Academic Senate - SJCC</td>
<td>Barbara Hanfling, Faculty Association - SJCC</td>
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<td>Lauren McKee, Administrative Services Supervisor - EVC</td>
<td>Chris Frazier, Academic Senate - SJCC (Alt.)</td>
<td>Mark Newton, Faculty Association - SJCC (Alt.)</td>
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<td>Keiko Kimura, Budget Committee Chair - SJCC</td>
<td>Phillip Crawford, Academic Senate - SJCC (Alt.)</td>
<td>Paul Fong, Faculty Association - EVC (Alt.)</td>
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<td>Peter Fitzsimmons, Executive Director Fiscal Services, DS</td>
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<td>Eugenio Canoy, Budget Committee Chair – EVC (Alt.)</td>
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1) **Call to Order:** 1:03 p.m.

2) **Approval of Meeting Agenda:**
   
a. Chris Frazier asked to add the following item to the agenda: Review Comparative DW/DS District Budget Expenditures.

   M/S/P; Ayes- 12, Opposed-0, Abstentions-0, Absent-3, a Motion to approve the amended agenda was made by Eric Narveson; Seconded by Paul Fong. The amended agenda was approved.

3) **Approval of 02/10/17 Meeting Minutes:**
   
a. The following corrections were recommended for the 2/10/17 minutes:
   1. Steven Graham should be listed as absent.
   2. 5c. should read: Mr. Frazier notes that the model budget for the Colleges is set-fixed, whereas the model budget for the District is not, however if the Colleges require more services from the District, they are then required to pay for those services. Mr. Frazier continues that the cost of District Services should be budgeted within the Colleges expenditures.
   3. 5c.i. should read: Mr. Stutzman recommends that the colleges model establish a specific expenditure percentage.
   4. 5f. should read: Mr. Smith poses the question, with knowing understanding we won’t don’t know the final property tax data point until May, do we augment along the way with each new data point, or do we set the final four data points aside, and deal with it in another way?
   5. 7a.i. should read: Mr. Stutzman notes that this comparison is difficult to compare equally as every district is organized differently, for example, some are partially District Centralized, and others are not. Secondly, Districts tend to characterize their expenditures in different ways such as utilities being central vs. decentralized.

   M/S/P; Ayes- 14, Opposed-0, Abstentions-2, absent-3, A motion to approve the amended minutes was made by Eric Narveson; seconded by Paul Fong. The amended minutes were approved.

4) **Information - Simulation #6:**
   
a) Mr. Stutzman distributed and discussed Simulation #6 which serves as an example, if our district were apportionment only.
   
   i) Mr. Newton questions if this model covers a 1-year, or 3-year span.
   
   (1) Mr. Stutzman responds that this model is based on a 1-year span using FY2016-17 FTES data.
ii) Mr. Stutzman draws the committee’s attention to the Balance/Deficit line of the simulation to illustrate the large deficit each of the colleges would be in, if we were not a basic aid district.

(1) Ms. McKee and Mr. Gonzalez remind the committee that while this scenario may be unlikely, it is very important for this committee to understand as a point of reference.

(a) Mr. Stutzman responds that, yes, this is more of a “doomsday” scenario, but his real concern for the district is if the economy levels off, we will still have the rising costs of healthcare benefits, etc. to manage.

5) **EVC and SJCC CTE Program Enrollment and Cost:**

a) Mr. Stutzman distributed the CTE enrollment and cost reports to the group, noting that the purpose of this report is to discuss whether these costs differ materially, and not whether one CTE program costs more than another.

i) Mr. Castilla voiced concern to the group that Mr. Stutzman seems to be making those judgements independently of what is/is not material.

(1) Mr. Stutzman responds that ultimately the decision is up to this committee and the colleges to determine. This report is simply to illustrate what the data currently shows.

ii) Ms. McKee notes to the group that as we review, we should also be considering whether these CTE courses are meeting class size requirements.

b) Mr. Smith requests, in order to expedite the committee’s process, that Mr. Stutzman be allowed to fully present the data before we open this agenda item for discussion and questions.

c) The committee questioned where this data came from.

i) Mr. Stutzman responds that the information used to generate these reports came from ITSS. Mr. Stutzman further describes that there are some instances, specifically the Facilities Maintenance Tech Program, where the data did not seem to sync up, and thus a request to the colleges has been made to verify that data.

(1) It was noted that ITSS simply creates these reports from data entered at the campus level.

(2) Mr. Fitzsimmons notes that there are two worlds overlapping, Finance and Research (i.e. cost centers and FTES/FTEF), which due to their differing language, result in some areas of data disconnect. Mr. Fitzsimmons further describes that our overall goal is to find out how much each of these CTE programs cost and reminds the group that while ITSS provided its understanding of CTE programs based on the data, those programs may not necessarily qualify as CTE programs in “real-world” application (i.e. Accounting).

(3) Mr. Fitzsimmons concludes that for the purposes of this exercise, as a group, we should determine a refined list as to what qualifies as a CTE program.

(a) Mr. Frazier adds that while we are developing this refined list we need to keep in mind the differing needs of the student.

b) Mr. Stutzman re-focuses the group, noting the purpose of this exercise is to try to determine CTE costs, college to college. (i.e. if each college offers the same program, that program should be a wash.)

i) Mr. Frazier notes to the committee that, in his opinion, this is a fundamental disagreement, when considering those students more socio-economically disadvantaged than others.

ii) Ms. McKee adds that while we are refining what qualifies as a CTE program, we need to be able to separate general education courses from CTE programs (i.e. Accounting). Ms. McKee further states that CTE courses, in general, cost more because they are serving fewer students. Ms. McKee continues that these CTE programs allow a student to receive a certificate, immediately enabling them to obtain a job.

iii) Mr. Gonzalez follows that not all duplicated CTE courses are a wash due to the fact that some students may need more help than others to create a level playing field.

(1) Mr. Stutzman agrees that some students cost more as they may require additional services, however those decisions should be based at the college level and not through an allocation model.

(2) Mr. Escobar responds that we appear to have two scenarios:

(a) We can treat the student as one, absolute, or

(b) We can break the level of support that each student requires.

(i) Mr. Escobar further explains that while yes, program costs require different expenses and these should be managed at the college level, if the colleges are provided the same
amount of funding, it is now up to the college to manage that program by cutting another
in order to serve the program with greater student service needs.

(ii) Mr. Escobar additionally requests that each of the duplicated CTE programs be reviewed,
as the worksheets display, in some programs, a 30% difference in productivity between
the two colleges.

(3) Mr. Stutzman responds that, in his opinion, these duplicated CTE programs are a wash. Mr.
Stutzman further clarifies that if a college chooses, based on program demand, to run a particular
CTE program, the college would then manage other programs accordingly in order to compromise.

(iv) Ms. McKee notes a concern to the committee that we are not starting with the question of 1) what
qualifies as a CTE program, and what does not, and 2) what qualifies as a general education course,
and what does not?

(1) Mr. Stutzman responds that this data is based on what the district is provided with by the colleges
program code data entry.

(2) Mr. Frazier comments that we do not have to have all of the data today, but in order to progress
forward, he recommends that we decide if this data is worth pursuing.

(v) Mr. Newton reiterates that, to call these duplicated programs a wash seems difficult, just by looking at
class size and a particular campus’s ability to house a program based on facility capacity.

(1) Mr. Stutzman responds that the decision would then be up to the college to determine its
constraints in one area and opportunities in another, in order to maximize the use of the facilities
available.

(a) Mr. Frazier notes that the colleges are not just constrained by facilities, but also by program
reviews and student success, as well as ACCJC requirements and the Board’s Ends Policies.

(vi) Mr. Stutzman moves on through the document describing the total cost per FTES calculations, which
are based on the annual costs for FY2015-16.

(vii) Mr. Narveson poses a question to the group as to how we can put a value on the various intangible
issues that the group has discussed, thus far?

(1) For example:

(a) The automotive program requires a higher cost due to vehicle purchase, and the insurance
required to have students work on those vehicles, safety costs, etc. vs. the accounting
program which has comparatively much fewer costs including facilities overhead and textbook
costs.

(i) Mr. Narveson further questions how we decide on the balance and measure of that?

(viii) Mr. Covarrubias requests that a column be added to the CTE worksheet that shows the number of
degrees and certificates completed.

(ix) Mr. Frazier notes that approximately 50% of categorical funding is equity based and that the colleges
are not given access to these funds in terms of the decision-making process.

(a) Mr. Gonzalez responds that it is the State Chancellors Office that makes all decisions related to
Categoricals. The district has access to fund 10, which is what this committee is looking at.

(i) Mr. Stutzman questions how the DSPS funding is broken down, to which the committee
clarifies that it is based on the number of students served (student data reported to the
state), and that it is a much more complicated formula.

(b) Mr. Newton follows by asking the committee “what kind of data can we use right now that
would help to improve this discussion? Students, class size, student limitations, etc.?”

(i) Mr. Narveson responds that we could come up with a formula by evaluating those criteria,
thus creating a model that is not purely based on FTES.

(ii) Mr. Newton questions the group if we are close to simulation #5? The committee agrees.

1. Mr. Newton follows that “Roy knows what he is talking about.”

(c) Mr. Newton continues by reminding the committee that we have a mandate to complete this
work by Spring 2017 in order to meet the accreditation requirement. As such, is this group
able to try to achieve a draft, recognizing that it will not be perfect, and future adjustments
will need to be made?

(d) Mr. Frazier further reminds the group that we need a strong brand to draw more students to
our campuses as a method of preventing against slower economic turns as property taxes
begin to level off.
(e) Mr. Gonzalez makes a suggestion to revisit the CTE document once the campuses have verified the data. Mr. Gonzalez further poses a question to the committee if there are any other variables that we can use other than FTES?

(i) Mr. Newton responds that we need to determine if this group can accept an FTES based model as the Accrediting Commission has charged us with creating a budget model.

(ii) Mr. Gonzalez agrees, and states that the committee is now to the point of needing to plug in numbers to these models, but before we can do that, the data needs to be cleaned up.
   1. Mr. Stutzman reminds the committee that multiple simulations have been provided to the group with a request for the members to manipulate the information and make suggestions as to a better solution.

(iii) Mr. Gonzalez notes that based on the models presented, we should be able to begin developing our own formulas based on the different variables.
   1. Mr. Hawkins responds that in order to do that we need to develop a list of those variables.
   2. Mr. Narveson provided a handwritten list of variables to staff:
      a. Base Allocation based upon FTES
      b. Overhead cost of CTE Programs
      c. Percentage of Academic Programs vs. CTE
      d. Amount of Non-Credit Programs
      e. Number of disadvantaged students, such as:
         f. Hispanic Serving
         g. Asian Serving
         h. African-American Serving
         i. Athletic Programs
         j. Graduation Rate
         k. Number of Degrees and Certificates
         l. Training and Staff Development
         m. Accreditation Status?

(iv) Mr. Hawkins further notes the importance of budgeting, in terms of salaries, we need to consider if a cost is on-going or new.
   1. Mr. Smith follows that all of the simulations have been based on the FY2016-17 adopted budget starting with the first property tax data point and that Collective Bargaining has been dealt with from that point forward using opportunity money from the four additional data points.

x) Mr. Smith wraps up the discussion by noting to the group that it appears as though our next steps should be to brainstorm a list of variables to review next week.
   (1) ACTION: Mr. Smith’s office will distribute the list provided by Mr. Narveson with a request to the committee to respond with any changes or additions by early next week.

xi) Mr. Smith thanks Mr. Stutzman for his effort to illustrate the CTE differentials, and notes that this data should be brought back to staff for further review and verification.
   (1) Mr. Gonzalez reminds the group of the need to have one person at each campus dedicated to collecting this data.
   (2) Ms. Alexander responds that both she and Mr. Escobar, as Vice Presidents of Administrative Services at each of the campuses, agree to serve as liaisons between this committee and their Academic Services departments in order to obtain the verified data.
      (a) It was noted that this item would be added to the parking lot for further review at a later date.

6) **Comparative DW/DS District Budget Expenditures:**
   a) Mr. Frazier distributed a document illustrating a Trend Match which results in an upward curve statistical model.
   i) Overall, this document shows that there are three college districts (Peralta, WVMC, and SJECCD) that pay more per student than the average college district in the Bay 10 area.
(1) Mr. Smith thanks Mr. Frazier for his work, and requests out of respect for time, that this item be placed on the next meeting agenda for review and discussion.

7) **Closing Remarks:**
   a) Mr. Stutzman notes, that for the most part, the simulations provided are FTES based, or revenue based models, which, in his opinion, is in the best interest of the district. “Know the revenue before you allocate the funds.”
   b) Mr. Fitzsimmons notes to the committee that whatever results from this exercise, we must remember to not be so complicated as to create an undue burden on those that develop the budget, not to complicate it so much that it loses transparency, and not to complicate it so that only a few people understand the model. Additionally, Mr. Fitzsimmons notes that the Taskforce is charged with developing a revenue allocation model; however, we seem to be currently reviewing a cost allocation model which is much different.
   i) Based on Mr. Fitzsimmons comments above the committee agreed to add item d. below to the 03/03/17 meeting agenda.

8) **Build Next Agenda:**
   a) Total Cost of Ownership
   b) Discuss Variables
   c) Comparative DW/DS District Budget Expenditures
   d) Review the differences between Revenue Model vs. Cost Based Model

Meeting adjourned at 4:05 PM
Resource Allocation Model Taskforce

Meeting Minutes
March 3, 2017 – EVC, VPA-115

Present: Doug Smith, Andrea Alexander, Jorge Escobar, Lauren McKee, Keiko Kimura, Peter Fitzsimmons, Eugenio Canoy, Eric Narveson, Steven Graham, Guillermo Castilla, Chris Frazier, Yesenia Ramirez, Barbara Hanfling, Mark Newton

Absent: Fabio Gonzalez, Jesus Covarrubias, Philip Crawford, Dan Hawkins, Paul Fong

Also Present: Roy Stutzman, Sherri Brusseau

1) **Call to Order:** 1:10 p.m.

2) **Approval of Meeting Agenda:**

   M/S/P; Ayes-14, Opposed-0, Abstentions-0, Absent-5, a Motion to approve the agenda was made by Barbara Hanfling; Seconded by Chris Frazier. The agenda was approved as submitted.

3) **Approval of 02/24/17 Meeting Minutes:**

   a) The committee requested that the minutes be taken back for further staff review, as they felt much of the commentary was missing.

      i) Ms. Brusseau agreed to go back to the meeting recording for further review, and bring the February 24, 2017 meeting minutes back to the committee at its 03/10/17 meeting.

4) **Opening comments:**

   a) Mr. Stutzman opens with a recap of previously provided simulations, in that they are a framework for an allocation model that is understandable, starting with revenue, and then allocating that revenue by some objective means.

   b) Mr. Stutzman notes one of the other principles we want to build from is to be fair, and that we are still working towards this as we evaluate these other variables, measures, etc.

   c) And finally, Mr. Stutzman comments that these simulations are also meant to ensure fiscal integrity by not allocating more revenue than we have.

5) **Simulation #7 (Attachment A):**

   a) Mr. Stutzman distributes simulation #7 with a reminder to the group that a lot can be done with all of the simulations that have been provided, including the use of measures other than FTES.

   b) Mr. Stutzman notes that this simulation uses a 3-year rolling average of actual FTES.

   c) This simulation provides a base allocation of $20M with $10M being allocated to each college. A new allocation element called "College Program/Performance Allocation" has been added, whereby a total of $10M has been set aside to be allocated using, yet to be determined, agreed upon, quantifiable program/performance measures discussed during the 02/24/2017 meeting. For discussion purposes and not knowing otherwise at this point, $5M has been allocated to each college.

      i) Mr. Frazier questions where the $30M came from?

         (1) Mr. Stutzman responds that this is the difference between what we would receive as an apportionment district vs. what we currently receive being a basic aid funded institution.

         ii) Mr. Stutzman further notes that this simulation is based on a starting point of the colleges being equal, and it may turn out that after the committee measures these other variables, the colleges may still end up equal. That will be determined in the further discussion around other measures and variables.
iii) Mr. Frazier questions how the District Services and District-wide costs get encapsulated within this model?
   (1) Mr. Newton responds that the colleges would pay out for those District Services.
   (2) Mr. Narveson clarifies that Mr. Stutzman is proposing a cap in this simulation.

iv) Ms. Hanfling notes her continued concern for funding left to continue to cover medical benefits and raises.
   (1) Mr. Frazier questions, “how would that work?”
   (2) Mr. Stutzman responds that those costs will remain where they always have been, within the opportunity monies generated within the property tax data points.
      (a) Mr. Smith further clarifies that at the adopted budget we have the first data point, after that we receive four additional data points which, if they increase, serve as opportunity monies for those medical benefits and raises.
      (b) Mr. Newton notes that currently negotiations are handled by the District Office, however, with this model, those negotiations would then be pulled into discussion with the Unions and College Presidents. Mr. Newton further questions if we are looking for savings elsewhere in the district, where would we look to solve those inefficiencies?
      (c) Ms. Kimura notes similar to Mr. Newton’s comment – where the entities have the opportunity to access this in the event that new property taxes are not received?
         (i) Mr. Smith responds that we adopt at data point 1, and either all successors drop into the formula, or they are put off to the side for initiatives, collective bargaining etc.
         (ii) Additionally, Mr. Stutzman notes that currently, carryover salary savings is accessible to the college in year 1. It then rolls into the district in year 2, which could benefit the need for negotiations at the district level.
   (3) Mr. Frazier comments that we could consider raises to be a strategic factor.
   (4) Ms. Hanfling suggests that we keep thinking on this, but that we move forward from here.
   (5) Ms. McKee further expresses concern with not knowing where the funding is set aside for growth (i.e. Milpitas, etc.).

6) **College Program/Performance, Variables, Metrics, Measures (Attachment B):**
   a) Mr. Smith introduces the topic from the list of variables, originally provided by Mr. Narveson, and augmented by Mr. Escobar. Mr. Smith further questions the group if there is a way to quantify those variables, do they have a dollar value associated?
      i) **RAM VARIABLES:**
         (1) **Base Allocation based upon FTES for college and district services allocations:**
            (a) The committee agrees to keep this variable as is.
         (2) **Overhead cost of CTE programs (program cost analysis):**
            (a) Mr. Narveson clarifies that this item encompasses FTES, higher costs due to safety, pedagogy of courses, and total cost calculated by the student.
               (i) Mr. Stutzman notes that, the analysis provided at the 02/24 meeting, was an attempt to illustrate that total cost.
                  1. Mr. Newton responds that the 02/24 analysis did not account for differences in size.
                     a. Mr. Stutzman comments that if a college chooses to evaluate based on size, that evaluation will need to be conducted with all classes, not just CTE programs, which can be a challenge.
                     b. Mr. Newton further describes, for example, if accounting were a costly program, and the campus was trying to cut costs, wouldn't the college just reduce that costly program?
                        i. Mr. Stutzman notes that in that instance he suggests the campuses be asked to run those programs more efficiently.
                        ii. Mr. Castilla notes his concern with the use of a purely FTES approach, as basic skills course FTES would increase exponentially in order to offset those CTE course costs.
iii. Mr. Escobar suggests that based on program cost analysis, we are going to find that there are programs that are more expensive than others, and that this is a variable we should consider.

iv. Mr. Newton notes that based on Mr. Escobar’s comment, item number 2 & 3 on the RAM Variables list can be combined.

v. The committee agrees to combine #2: Overhead cost of CTE Programs (Program Cost Analysis), and #3: Percentage of Academic Programs Traditional vs. CTE.

(3) Percentage of Academic Programs Traditional vs. CTE:
   (a) This item was combined with item #2 per the above note.

(4) Amount of Non-Credit Programs:
   (a) Mr. Narveson notes to the group that we could use a different funding source (i.e. contract education, consortium)
   (b) Mr. Stutzman notes that in terms of apportionment funding, enhanced non-credit courses do not pay at the same rate as credit courses do.
   (i) Mr. Narveson questions if that is relevant in a basic aid district?
       1. Mr. Stutzman responds that if a college chooses to offer non-credit courses, that is their decision to make, which may not have much to do with the development of the allocation model. Mr. Stutzman further describes that non-credit has been included in our FTES, therefore any advantage or disadvantage that a college receives has been accounted for because credit/non-credit are both there.
       2. Ms. McKee comments that EVC is currently considering expanding non-credit programs, as it was previously a revenue source when the non-credit programs were more robust.
   (ii) Mr. Smith suggests to strike variable #4.
       1. Mr. Escobar reminds the group that we need to consider the operational cost when developing these credit/non-credit programs.
          a. Ms. Alexander comments that it is important that we remain consistent as we move through our research in this process, (i.e. the concern on 02/24/17 regarding $100k, with today’s suggestion of taking this variable off the table.)
          b. Mr. Frazier cautions that when new programs are created, we need to consider the potential future institutionalization costs of those programs.
             i. Mr. Stutzman reminds the group that the concept of this revenue based model is to start with the revenue and how it will be distributed, then it is up to the colleges to manage those funds in the best interest to serve their student population.
       2. Ms. Kimura agrees that non-credit should be called out in some way, but it should be time sensitive. (i.e. the startup costs associated with a new program.)
          a. Mr. Narveson suggests that this group create a set of guidelines for the development of those additional programs.
             i. Mr. Stutzman agrees, the development of guidelines is of the utmost importance.
   (iii) Ms. Hanfling suggests that we move on, and while we review this list, we set them in priority order.

(5) Number of disadvantaged students:
   (a) Ms. Hanfling notes that Trustee Cruz requested at the 02-28-2017 Board meeting, that the RAM Taskforce look at this item through an equity lens. As such, the group decided to change number five to: Equity Matrix/Equity Lens.
   (b) There was a suggestion from the group to lump variable #12 with variable #5.
       (i) Ms. Ramirez voiced concern with combining these as EOPS and DSPS are categorical, thus they are in the fund 10 budget.
       (ii) The group agrees to keep variable #12.
   (c) Mr. Fitzsimmons reminds the committee that the metrics used to measure the variables will theoretically change year-to-year. Mr. Fitzsimmons continues that the committee should think
about where the data coming from, the accuracy of that data, and the timing related to the budget development process. Mr. Fitzsimmons further describes that there appears to be signals from this group to cut District Services, however if we adopt a model that has multiple variables, we will need to add services, to District Services in order to accommodate those added variables.

(d) Mr. Smith poses the question: what is SJCC's equity lens, vs. EVC's equity lens worth?
   (i) Ms. Alexander responds, in her opinion, that this idea of placing worth on the equity lens is "counter-intuitive to the mission of this district to be on an equity lens, and then say that we are going to create competition for that equity amongst the two colleges."

1. Mr. Narveson agrees with Ms. Alexander's comment and suggests that we strike variable #5.
2. Mr. Smith responds that we will suspend this discussion for now, and move through the remainder of the list.

(6) Athletic Programs:
   (a) Ms. Alexander points out the need to consider expenses. For example, if one college receives more revenue than the other as a result of these athletic programs, then that college needs to absorb more of the expenses as well. (cost of staff, etc. – currently the staff is split 50/50).

(7) Graduation Rate, Persistence Rate, Attrition Rate:
   (a) Mr. Frazier notes that the goal is to create opportunities going forward; we should be rewarding success. Mr. Frazier continues by posing a question to the group as to how we create competition, causing colleges to get more student graduation outcomes.
   (i) Ms. Kimura follows Mr. Frazier's comment noting the need to use a rate, rather than pure FTES numbers, so one institution is not unduly penalized.
   (ii) Mr. Stutzman cautions that it sounds like the group is discussing performance based funding, which has not been widely accepted throughout the State, and in fact, SB 1143 was rejected by the system, as there was some concern with the possibility of districts "gaming" and placing more value on outcomes, which could possibly result in limited access to some students. Mr. Stutzman continues to note that, at the State level, there was a Student Taskforce dedicated to this effort, and it may be of use to this committee to review their work, should we decide to continue down this path.

(8) Number of conferred Degrees and Certificates (Output):
   (a) The committee agrees to combine variables #7 and #8 as long as they are per rate or percentage and not based on pure FTES numbers.
   (b) Mr. Escobar reminds the group that this list was created to provide a type of incentive program.
   (c) Mr. Smith reminds the group of the article that was distributed to this committee in September 2016 by Mr. Castilla that speaks to variable #7 and #8. (Attachment C).
   (d) Ms. Alexander reminds the group that we can find quantifiable data that can go either way.

(9) Gross Square footage and assignable square footage:
   (a) Mr. Stutzman suggests adding Grounds to this statement.
   (i) The committee agrees to this change.

(10) Training and Staff Development:
   (a) Mr. Narveson provides an example of EVC's Teaching and Learning Center.
   (i) Ms. Hanfling notes that, unless we receive funding from the State, the Presidents determine how much they want to contribute, and then both Staff Development Committees make decisions as to what type of training that funding will pay for.
   (b) The committee agrees this item can be placed at a low priority – tier 4.

(11) Accreditation Status? Warning, affirmation, probation? - - -:
   (a) Mr. Fitzsimmons comments that this may be a dangerous road to go down, as in one instance we may be rewarding one college for not being on sanctions, or conversely we will end up rewarding the other college because of the need for funding to get off of sanctions.
   (b) The committee agrees this item can be placed at a low priority – tier 4.
   (c) Mr. Escobar comments that "in a way we could need more resources to get out of probation, however when it comes to graduation rate, due to our increased rate, our enrollment looks
lower because we haven’t had available funding to put up front for enrollment, thus the amount of investment needed to get to a level of enrollment is different if graduation rate is faster.”

(i) Ms. Alexander notes that “variable #7, and variable #11 have the same argument.”

(12) Special programs EOPS, DSPS:

(a) Mr. Frazier notes that there are pockets of students that can be very costly.

(b) Mr. Newton questions the VPAS’s and Exec. Dir. of FS if this is an area that we have a great difference? Mr. Newton continues that the funding moved from fund 10 to assist these programs is driven by the Trustees, and not a college decision.

(i) Mr. Fitzsimmons responds that each of the colleges does use a portion of their fund 10 dollars to support some of these programs.

(ii) The committee agrees this item can be placed at a low priority – tier 3.

(iii) Mr. Frazier notes that in the future, this area may be substantially different and warrant further consideration.

(13) Operational analysis:

(a) Mr. Escobar suggests removing variable #13 from the list as it is picked up in variable #12 in terms of the additional costs needed at SJCC to accommodate the special needs program students. Mr. Escobar continues that it is worthwhile to review the total cost of operations (i.e. keeping the lights on, bathroom supplies, etc.).

(b) Mr. Frazier notes the need to review whether or not there are operational costs at the colleges that are not being absorbed by agreements that should be at the district level. Mr. Frazier continues that if a college is unable to purchase an operational cost item, or repairs are needed....

(i) Mr. Newton summarizes that it sounds like this item covers more of the idea around Total Cost of Ownership.

(c) Ms. Kimura asks, for clarification, if we are including only the two campuses under this variable or all entities within the district?

(i) Mr. Escobar suggests renaming this variable: Total Cost of Ownership.

1. The committee agrees with this name change.

(14) Staffing analysis – 2008 – today. Span of control, delegation ability:

(a) Mr. Escobar comments that he continues to question how, prior to 2008, the college district as a whole ran so effectively. Mr. Escobar continues that in 2008 the district had many more students than we do now, and approximately 200 more people employed. Mr. Escobar suggests that we should have a point of reference to understand what shifted?

(b) Mr. Smith summarizes that this is a data search request.

(i) Mr. Escobar responds that, in his opinion, it would be informative for this committee to see the type of support and service levels provided at that time, and whether they were similar or vastly different compared to our current status.

1. Mr. Stutzman questions who/how will the district perform this type of research, and how that will be completed in the context of an allocation model.

(15) How do we support categorical and grants (staffing, processing, activities)? - :

(a) Mr. Escobar comments that this ties into variable #12.

(i) Ms. Hanfling questions whether or not there is funding provided within a grant to help support staffing and processing activities?

1. Mr. Fitzsimmons clarifies that, yes, some grants include funding to cover those types of costs, however “not all money is good money” in that most grants include limitations as to what the money can be spent on.

(16) What support was added and how will new funds and initiatives help enrollment (strong workforce, adult education, noncredit, dual enrollment...): 

(a) Mr. Escobar notes that we all need to consider what types of demands are being put on staff to operate these programs.

(b) Mr. Fitzsimmons adds that District Services is in the same position, and notes that all of that funding should be distributed via a process that is required by all entities.

(c) Mr. Newton questions if this variable is a college level variable?
Ms. Alexander responds that this is not a college level variable. Ms. Alexander further clarifies that, for example, the colleges are encouraged to apply for grants, whether the staffing to manage them exists or not (i.e. the application of the grant is not always a college decision, but it is a college mandate administered by the Board).

Mr. Fitzsimmons notes that this applies to “total cost of ownership”.

17) Cost of administration, instruction, services by entity:
(a) Mr. Escobar comments that this applies to “total cost of ownership”.

18) Discretionary funding – how much is for keeping the lights on:
(a) Mr. Escobar comments that, without the RAM, discretionary is difficult for the colleges to manage.

(i) Mr. Stutzman reminds the group that this is a “zero sum game” in that we have $95M at adopted budget, so how we decide to arrange that is the committee’s decision.
1. Mr. Newton notes that at some point we need to address if we are placing the funds where they need to be placed, or are there other places where we can make savings? Mr. Newton continues that the way that the budget model is constructed, the colleges receive the funding, they provide DS/DW with their funds without consideration for efficiencies, and then, as a result, the colleges are required to figure out how to accommodate those efficiencies. In closing, Mr. Newton states that we have to have the ability to monitor our efficiencies.
   a. Mr. Stutzman comments the approach being proposed here is better in that those costs are not off the top and are visible. The District Office has to justify their costs each year via Cabinet and at times DBC so there is transparency around what those costs are. Thus, moving forward, it will not be the same as it has been.
      i. Ms. Hanfling notes that there is currently a lack of transparency about where the district provides justification for their costs.
      ii. Mr. Stutzman notes that there needs to be some review of those services, which we have done with this committee.
      iii. Mr. Newton asks if we are creating a budget process that is going to allow us to “shake money free” at a later time?
      iv. Mr. Narveson responds that all utilities are paid by the district, thus in an attempt to find different ways to ‘shake money free’, one possibility would be for SJCC to install solar panels on the top of their buildings. Mr. Narveson continues that one of the key things we need to remember is that some of these decisions are out of our control, as they came from decisions made by the Board of Trustees.

7) Closing Remarks:
   a) Mr. Smith reminds the group that the next meeting is scheduled for next Friday, March 10th in EVC VPA 115 from 1:00 p.m. to 4:00 p.m.
   b) Ms. Hanfling noted that the meeting went very well and there was good discussion control.
   c) Mr. Newton recommends that the two VPAS’s determine the top priorities from the variables list.
   d) Mr. Escobar reminds the group that the colleges are not fighting against each other in this process, rather they are working together to be advocates.
   e) Ms. Alexander echo’s Mr. Escobar’s comments and is passionate about this project.
   f) Mr. Stutzman expresses appreciation to the group for its engagement, and understands the struggle to operate within these parameters. Mr. Stutzman adds that he continues to provide simulation recommendations, and that there are many ways the committee should be able to make this model/framework operate. Mr. Stutzman emphasizes that Simulation #7 allocates $30M on a basis other than FTES, thus he would not characterize this model as purely FTES. In closing, Mr. Stutzman comments that now is the time for the committee to bring their ideas forward.

Meeting adjourned at 4:01 PM
## San Jose-Evergreen Community College District
### SB 361 Allocation FUND 10
#### 2016/17 Adopted Budget

**SIMULATION # 7 (3 YR. AVG ACTUAL FTES)**

<table>
<thead>
<tr>
<th>REVENUE TO BE DISTRIBUTED</th>
<th>SJCCD 3YR AVERAGE TOTAL/CREDIT, NON-CREDIT &amp; NR (13/14; 14/15; 15/16)</th>
<th>SJCC 3-YR AVERAGE FTES</th>
<th>EVC 3-YR AVERAGE FTES</th>
<th>SJCC Allocation</th>
<th>EVC Allocation</th>
<th>Milpitas Extension</th>
<th>WFI</th>
</tr>
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<tr>
<td>CR &amp; NC (RFTES)</td>
<td>12,334</td>
<td>5,965</td>
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<td>Non- Resident</td>
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<td>246</td>
<td>160</td>
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<tr>
<td>Total FTES</td>
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<td>6,213</td>
<td>6,529</td>
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### Property taxes
- Secured: $75,914,000
- Supplemental Secured: $2,037,000
- Unsecured Roll: $6,247,000
- RDA Passthrough: $1,242,600
- RDA Residual Payments: $2,282,000
- Total Property Tax: $89,158,600

### College Program/Performance Allocation
- BASIC ALLOCATION: $20,000,000
- Milpitas Extension: $750,000
- Workforce Institute: $125,866

### Other Revenues
- Mandated Cost: $1,440,733
- EPA: $1,250,000
- Lottery: $1,800,000
- Other State Income: $3,118,553
- Other local income: $910,811
- Property Rental: $150,840
- State Reimbursed Cost: $214,336
- Use of facilities: $170,872
- Other Financing Sources: $227,376

### Total Other Distributed per FTES
- $9,440,851

### Total Non-Campus Generated Revenues Allocated
- $98,599,451

### Other
- DW EXPENSE: $12,548,875
- Assessment per FTES: $6,618,741
- DISTRICT SERVICE EXPENSE: $15,982,935
- Assessment per FTES: $7,793,164

### Net Allocation
- $33,840,745

### Revenue per FTEs
- $5,446.76

### Plus College Generated Revenue
- Instructional Materials fee: $31,623
- Enrollment fees inti students: $659,809
- Enrollment fees residents: $2,748,236
- Enrollment fees non residents: $366,801
- Parking fees: $133,227
- Other local income: $191,201
- B.O.G. (2% Admin Fee): $117,715
- Federal NIAA Program: $1,000,000
- Other financing sources: $350,000

### Total
- $8,691,616

### Total Revenue
- $107,291,067

### Net Allocation + College Revenue
- $38,439,857

### Revenue per FTEs
- $6,187

### Less Expenditure Budget
- $39,855,546

### Expenditure per FTEs
- $6,415

### Balance/Deficit
- $-1,415,688.95

### Control Numbers (From Adopted Budget Document)
- Revenues in Adopted Budget: $107,291,067
- Expenditures in Adopted Budget: $109,680,914
- Deficit: $2,389,847
1. Base Allocation based upon FTES for college and services allocations
2. Overhead cost of CTE Programs (Program cost analysis) and Percentage of Academic Programs Traditional vs. CTE
3. Amount of Non-Credit Programs
4. Equity Matrix/Equity Lens
5. Athletic Programs
6. Graduation Rate, Persistence Rate, Attrition Rate
7. Number of conferred Degrees and Certificates (output), and gross square footage and assignable square footage, including grounds.
8. Training and Staff Development - Priority Tier 4
10. Special programs EOPS, DSPS - Priority Tier 4
11. Total Cost of Ownership
13. How do we support categorical and grants (staffing, processing, activities)
14. What support was added and how will new funds and initiatives help enrollment (strong workforce, adult ed., noncredit, dual enrollment..)
15. Cost of administration, instruction, services by entity
16. Discretionary funding – how much is for keeping the lights on
Community colleges are under pressure to increase completion rates, prepare students for the workplace, and contain costs. Colleges need to know the financial implications of what are often perceived as routine decisions: course scheduling, program offerings, and the provision of support services. This chapter presents a methodology for estimating the cost of instructional programs for completers who follow the program’s curriculum (program cost) and for students who follow a different trajectory, often not even completing a program (pathway cost). Together these measures provide important insights to guide decision makers.

Program Costs and Student Completion

Terri M. Manning, Peter M. Crosta

Introduction

Measuring cost has become critical for community colleges over the past five years. As economic conditions have deteriorated, record numbers of students have flocked to community colleges for retraining, whereas state support for higher education has decreased. Administrators readily know what it costs students to attend community colleges but may not necessarily know exactly what it costs colleges to educate students in different programs. In order to make better resource allocation decisions or improve production efficiency, it is important for administrators to have a framework for measuring and understanding program costs and related concepts (Belfield, Crosta, & Jenkins, 2014).

In this chapter, we discuss a way in which community colleges can estimate two important costs: costs for academic programs and costs for student pathways. As explained next, the two costs differ in that the program cost emphasizes instructional costs and assumes program completion, whereas the pathway cost does not. Both are important for understanding how community college students incur costs to the institution and to themselves and how changes in policy and practice may impact overall institutional cost and efficiency. We also present in this chapter an efficiency metric or cost per unit of output. The writers understand that there is a great variation across colleges and state systems in how colleges generate revenue and
distribute funding by department. The model identified here would need to be adapted by each state to make it meaningful at the local college level.

However, before discussing cost in more detail, it is helpful to understand the revenue source of community colleges. Most community colleges are funded on the basis of varying formulas that take into account tuition, fees, and appropriations from state, regional, or county governing agencies derived from taxes and on the basis of student seat time in classes. In some states, local property taxes also generate revenue that is not associated with enrollments. Overall, community colleges are the lowest funded sector of education and receive a set dollar amount for tuition and a set dollar amount per FTE (full-time equivalent) student or credit hours from their respective states, sometimes without taking into account the actual cost variation among programs and courses (Century Foundation Task Force on Preventing Community Colleges from Becoming Separate and Unequal, 2013). Some states (such as North Carolina) have created tiered funding as an attempt to address the costs of second-year and/or technical programs with high equipment costs and low faculty-to-student ratios. Tiered funding in North Carolina began two years ago, after the data for this study were collected. Other states partially fund colleges on the basis of performance or completion of students in degree or certificate programs. This performance-based funding has already taken hold in many states and may become a reality for most community colleges in the near future. Ultimately, colleges generally will spend whatever revenue they raise, from whatever the source. This chapter is written from the perspective of a college under North Carolina’s funding formula prior to the onset of tiered funding, but the general ideas and methods could be extended to other states.

Why Estimate Costs of Academic Programs

When community college administrators look at cost studies, they are typically observing economic impact studies that quantify the return on investment for a student who completes coursework or for the community that invests dollars in public education. Depending on the state, colleges may not typically break cost down to the unit record level (by discipline, by course) in order to calculate costs per student per course, which are the building blocks of all programs. But by calculating unit-record-level costs, colleges can understand the factors that affect costs, where changes can be made to increase efficiency, and where recruitment and retention efforts should be focused.

In many cases, managers of academic programs are able to see their own budgets but have no common metric to measure costs across courses and are unable to estimate the college’s investment for a student to complete any given degree program. But all courses are not created equal. Some are “cash cows,” those courses that generate large numbers of FTE and are inexpensive to deliver (e.g., speech, English, history), whereas others are
very expensive to deliver and generate far fewer FTEs (e.g., engineering and nursing).

How to Estimate Program Costs

Program instructional costs (all costs incurred by an academic area or discipline in the delivery of courses) can be measured by anyone at the college who has access to financial and FTE reporting systems, but it is typically done by institutional research and financial services staff. Program costs can be estimated by utilizing the following: annual financial budget reports broken down by instructional department; regional, county, or other local funding sources; grants and contracts; FTE enrollment broken out by prefix and course; and credit hours calculated from FTE (e.g., 1 FTE = 32 credit hours in North Carolina). Cost can only be broken down as far as financial records can be obtained. For example, in some colleges, the behavioral sciences unit has one budget code that covers history, psychology, sociology, and so on. Cost can only be broken down to the department level, meaning that sociology costs and psychology costs cannot be differentiated from one another but will be the same. If the social sciences department has one budget code for each discipline, social sciences could be broken down to the discipline level. Budget codes assigned to departments are typically not assigned so that discipline areas can study themselves but rather for the ease of financial services staff to monitor budgets and conduct audits.

It should be noted that a great variation in calculating unit-level costs occurs across community colleges. In some colleges, equipment and technology are purchased and distributed through a central department, whereas at others those costs are allocated to the academic program or department. Once cost data are disaggregated by department and discipline, the data should be vetted by each academic area to verify or raise questions about data accuracy.

Table 4.1 provides an example of variations in instructional costs and reimbursement (revenue) levels for courses in various departments. The table shows some high-demand, low-cost departments (general education courses) and some technical program departments (higher cost courses). The cost column is generated from two key pieces of information: the FTE enrollment in the department and the total amount spent in that department’s budget code on instruction. Cost is calculated on the basis of the instructional budget (revenue) for the program (including tuition and fees, FTE state reimbursement, county dollars, and grant funds) divided by the total credit hours generated (number of FTE times credit hours in an FTE).

In the 2008–2009 year, a student taking a three-credit-hour sociology course cost the college $115.38 (3 credit hours × $38.46), for which it was reimbursed (state appropriations) $302.52 (3 credit hours × $100.84). The college earned $187.14 more than it cost to educate the student. Keep in mind that if a student fails or withdraws from the sociology class and
Table 4.1 Cost per Credit Hour Versus State Reimbursement for Sample Courses at Central Piedmont Community College, NC

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General education departments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavioral sciences (e.g., psychology)</td>
<td>38.46</td>
<td>100.84</td>
<td>44.02</td>
<td>99.77</td>
</tr>
<tr>
<td>Speech communications</td>
<td>58.02</td>
<td>100.84</td>
<td>54.64</td>
<td>99.77</td>
</tr>
<tr>
<td>English, reading, and humanities</td>
<td>41.59</td>
<td>100.84</td>
<td>42.53</td>
<td>99.77</td>
</tr>
<tr>
<td>Mathematics</td>
<td>37.28</td>
<td>100.84</td>
<td>39.60</td>
<td>99.77</td>
</tr>
<tr>
<td>Sciences (e.g., biology, chemistry)</td>
<td>42.66</td>
<td>100.84</td>
<td>44.74</td>
<td>99.77</td>
</tr>
<tr>
<td>Spanish</td>
<td>41.04</td>
<td>100.84</td>
<td>38.57</td>
<td>99.77</td>
</tr>
<tr>
<td>Art</td>
<td>63.82</td>
<td>100.84</td>
<td>56.70</td>
<td>99.77</td>
</tr>
<tr>
<td>Computer science</td>
<td>56.05</td>
<td>100.84</td>
<td>54.69</td>
<td>99.77</td>
</tr>
<tr>
<td>Technical program departments</td>
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<tr>
<td>Cytotechnology</td>
<td>418.38</td>
<td>100.84</td>
<td>533.74</td>
<td>99.77</td>
</tr>
<tr>
<td>Mechanical engineering</td>
<td>208.18</td>
<td>100.84</td>
<td>206.16</td>
<td>99.77</td>
</tr>
<tr>
<td>Nursing</td>
<td>124.67</td>
<td>100.84</td>
<td>126.10</td>
<td>99.77</td>
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<tr>
<td>Dental hygiene</td>
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<td>Nondestructive evaluation welding</td>
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<td>100.84</td>
<td>113.34</td>
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<td>101.77</td>
<td>100.84</td>
<td>114.73</td>
<td>99.77</td>
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<tr>
<td>Culinary arts</td>
<td>109.02</td>
<td>100.84</td>
<td>87.26</td>
<td>99.77</td>
</tr>
</tbody>
</table>

Note: North Carolina reimbursements were not yet differentiated by program in 2008–2009 or 2009–2010.

retakes it the next term, the college will again be reimbursed $187.14 more than it cost to educate the sociology student. Technical courses do not result in a net positive dollar amount. If in the same year a student enrolled in a three-credit-hour cytotechnology course, it cost the college $1,255.14 (3 credit hours × $418.38) to educate the student, for which it was reimbursed $302.52. The college was reimbursed $952.62 fewer dollars than was spent educating the student. If this student fails or withdraws from the course and retakes it the next term, the college will lose another $952.62.

What Can Unit-Record-Level Cost Data Do for Your College?

Because departments have different costs associated with their courses, academic programs that combine these courses will have costs that also vary greatly. Degree programs consist of general education courses, entry-level courses in the major or related disciplines, and second-year courses in the major that lead to a degree. For example, the Health Information Technology program listed in Table 4.2 shows that students in this program take courses from 10 different disciplines that all have different cost amounts.
Table 4.2  Health Information Technology 2009–2010

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
<th>Cost per Credit Hour (US$)</th>
<th>Total Cost (US$)</th>
<th>FTE Reimbursement (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIT 110</td>
<td>2</td>
<td>139.32</td>
<td>278.64</td>
<td>199.54</td>
</tr>
<tr>
<td>HIT 112</td>
<td>3</td>
<td>139.32</td>
<td>417.97</td>
<td>299.31</td>
</tr>
<tr>
<td>HIT 114</td>
<td>3</td>
<td>139.32</td>
<td>417.97</td>
<td>299.31</td>
</tr>
<tr>
<td>HIT 210</td>
<td>3</td>
<td>139.32</td>
<td>417.97</td>
<td>299.31</td>
</tr>
<tr>
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<td>139.32</td>
<td>557.29</td>
<td>399.08</td>
</tr>
<tr>
<td>HIT 214</td>
<td>2</td>
<td>139.32</td>
<td>278.64</td>
<td>199.54</td>
</tr>
<tr>
<td>HIT 215</td>
<td>2</td>
<td>139.32</td>
<td>278.64</td>
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<tr>
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<td>Total</td>
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<td>6940.423</td>
<td>7382.98</td>
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<tr>
<td>Profit or loss</td>
<td>Profit</td>
<td>442.56</td>
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</table>

per credit hour generated. Although the Health Information Technology courses cost more to teach than was reimbursed from the state as FTE, the program made money for the college due to courses from 10 other discipline areas.

The three items that most influence the cost of programs are class size (total cost for a course divided by 30 enrolled students is higher than for 100 enrolled students), longevity/earnings of the faculty member, and high equipment needs for programs. Although colleges cannot always control for these issues, the following efforts can be made to decrease the numerator or increase the denominator and influence cost:

1. **Manage enrollment.** Make sure the correct number of sections is being offered to fill at 80% (or greater) of capacity. Efforts to increase
course completions and retention will also decrease costs and improve efficiencies (especially in high-cost programs where colleges spend more per credit hour than they receive in revenue).

2. **Consolidate programs.** Bring programs together that use similar equipment so that they can share microscopes, high-tech simulators, and technical equipment.

3. **Grow enrollment.** Bring in the marketing unit to help programs and courses grow their enrollment (potentially the quickest way to reduce cost).

4. **Take a look at the relevance of the curriculum.** Is it up to date? Is enrollment declining due to lack of employment opportunities in your community? It may be time to either reduce course offerings or develop an entirely new curriculum.

Colleges can also use cost data to raise funds within their communities. Students graduating from health programs such as nursing, dental hygiene, medical laboratory technology, and other high-demand majors are quickly hired by local hospitals and medical practices. Colleges can approach their community health organizations and ask for financial support in the form of scholarships or equipment to help subsidize or underwrite the costs of training these students. Organizations may be willing to participate, especially because corporate donations are tax deductible.

**Why Estimate Costs of Student Pathways**

Extending the method of determining program costs and combining it with longitudinal student data, one can compute costs of student pathways. This is important because the theoretical program costs discussed earlier often differ dramatically from the actual cost to the college as a student moves through her program of study once we take into account dropout and transfer. The program cost is one part of the pathway cost.

**How to Estimate Pathway Costs**

We introduce two concepts here that are related to the aforementioned program costs: the **pathway** and the **pathway cost**. A student pathway refers to the courses and services that a student consumes through his or her college career. This includes developmental education, traditional courses, online courses, student services, facilities, and administration. The pathway is fundamentally the student experience. The pathway cost refers to the costs incurred by the college for enabling the student to pursue an educational pathway. Pathway costs differ from program costs in three important ways. First, the pathway cost includes both instructional and noninstructional expenses. Second, the instructional side of the pathway cost will generally be different from the program cost as students move in and out of different programs of study. Third, the program cost assumes that a student completes
his or her program; the pathway cost allows for attrition. Importantly, this means that, generally speaking, every student’s pathway cost is unique.

As mentioned earlier, program costs emphasize the instructional cost associated with a program of study as determined by budget allocations to academic departments. They exclude the costs associated with administration, student support services, college operations, and facilities, which can comprise up to half or more of a college’s overall budget. It is a challenge to determine how students incur such costs, however, since usage patterns will vary considerably and will be undocumented. For example, some students may make heavy use of the library, whereas others do not; a heavy library user can be thought of as incurring greater noninstructional costs than a light library user. However, advances in data collection could provide colleges with more granular information about actual usage of services and, therefore, enable institutions to make more accurate allocation decisions. Analysts can make any number of assumptions to estimate noninstructional costs associated with pathways, but they largely amount to a scaling factor applied to instructional costs. For example, using data from the Integrated Postsecondary Education Data System (IPEDS), one may estimate that noninstructional costs (e.g., cost of facilities, students services staff, administrative support, and libraries) may be one to three times the measured instructional costs.

Measuring pathway costs for completers and noncompleters is essential to understanding how different types of students incur costs and for calculating realistic average pathway costs for different programs or student groups. Programs with high attrition or early transfer rates will have average pathway costs that are considerably lower than the estimated program cost. Therefore, pathway costs that take into account the true student pathway will provide a much more realistic sense of the costs incurred by students to the institution.

The Efficiency Metric: Cost per Unit of Output

Taking into account completers and noncompleters is also essential to measure output-adjusted pathway costs. Adjusted pathway costs provide a way to compare program costs on a scale that corrects for student success in each program. In order to do this, however, it is necessary to have a measure of output. Although education is a multiple-output process, calculating adjusted pathway costs requires an output measurement that is quantifiable and can be distilled into a single number. In the past, we have used an output measure called associate-degree equivalents, which considers an associate in arts degree as one unit of output (Belfield et al., 2014). Other degrees and certificates are worth a proportional amount depending on the average number of credits graduates complete. For example, if a 64-credit associate degree is worth one unit of output, but the average AA holder graduates with 70 credits, a certificate where the average certificate holder
earned 35 credits is worth 0.5 units of output. In the models detailed in Belfield et al. (2014), output was awarded only for completion or transfer but not for credits alone; that is, progress through credit accumulation is not considered output unless it results in completion or transfer.

Combining student pathway costs with an output measure enables the calculation of the adjusted pathway costs. More informative program costs result from the adjusted pathway cost. Consider the following example. The average pathway cost of 100 students who began college by taking developmental education courses is $15,000, whereas the average pathway cost of 100 students who began in college-level math and English is $30,000. Simply comparing pathway costs results in the conclusion that developmental education students are less expensive to educate than college-ready students. However, consider that the 100 developmental education students produce 10 units of output (developmental students complete credentials at a much lower rate than college-ready students) and the college-ready students produce 50 units of output. The adjusted pathway cost for all 100 developmental education students is $150,000 compared to the adjusted pathway cost of $60,000 for college-ready students: developmental education students are 2.5 times more costly to educate than college-ready students when considering both costs and outcomes. This exercise is not only useful for looking at different student starting levels but for comparing program-level costs. Which academic programs are the most efficient?

Consider the sample data shown in Table 4.3, taken from data at a North Carolina community college. The pathway costs are shown in Column 2, output in Column 3, and adjusted pathway costs (or cost per completion) in Column 4. Note that the college-ready pathway is more expensive than the developmental education (DE) pathway, but when adjusting for output, the cost per completion is much less expensive for students who start college ready. We also note, at this college, that students in allied health fields are more efficient than those in mechanics/repair programs even though the average pathway costs for these fields suggest that allied health programs are more expensive.

**Changes in Adjusted Pathway Costs**

Various community college reforms and interventions seek to reduce the adjusted pathway cost by either shrinking the cost of education or increasing the educational output. One question we might ask is how these interventions may impact expenditures and output. For example, a new student outreach program that identifies and provides support for vulnerable students may increase output for our developmental education starters but may also require additional resources. The intervention may, in theory, impact some students so that more developmental education starters complete the developmental education sequence and enter college-level coursework. What type of effect might this have on our cost model?
### Table 4.3 Pathway Costs, Output, and Costs per Completion

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<tr>
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<tbody>
<tr>
<td>All students in 2005–2006</td>
<td>3,810</td>
<td>13,970</td>
<td>477</td>
<td>111,310</td>
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<tr>
<td>Full time in first semester</td>
<td>1,530</td>
<td>19,580</td>
<td>271</td>
<td>110,660</td>
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<tr>
<td>Part time in first semester</td>
<td>2,280</td>
<td>10,220</td>
<td>206</td>
<td>112,930</td>
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<tr>
<td>Field:</td>
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</tr>
<tr>
<td>Allied health</td>
<td>111</td>
<td>30,560</td>
<td>24</td>
<td>142,050</td>
</tr>
<tr>
<td>Mechanics/repair</td>
<td>120</td>
<td>21,710</td>
<td>15</td>
<td>172,470</td>
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<tr>
<td>General liberal arts/science</td>
<td>1,460</td>
<td>17,250</td>
<td>222</td>
<td>113,300</td>
</tr>
<tr>
<td>Business/marketing</td>
<td>170</td>
<td>16,320</td>
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<td>117,890</td>
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<tr>
<td>Initial placement:</td>
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<tr>
<td>College ready</td>
<td>200</td>
<td>19,670</td>
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<td>880</td>
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<td>DE placement level 3</td>
<td>860</td>
<td>15,390</td>
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<td>173,390</td>
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</tbody>
</table>

**Notes:** College credits only; not remedial education credits. Weights are based on the average duration to complete the award. Only data for curriculum (award-bearing) students are reported. Numbers rounded to nearest ten.

**Source:** Adapted from Belfield et al. (2014, p. 336).

One way to estimate the impact is to simulate the expected new reality using our existing data on student pathways. For the above example, consider that of those 100 developmental education starters, 50 complete the remedial sequence and 50 do not. Assume that an intervention is expected to increase the percentage of sequence completers by 20%, so that 60 complete the sequence and 40 do not. We can design a computer program (e.g., Stata, SAS, SPSS, or R) that allows us to simulate what the pathway’s cost and output for this simulated student body might look like. That is, we can randomly replace developmental sequence noncompleters with sequence completers and calculate costs and output. Repeating this process 1000 times or so and averaging the results will provide an estimated average change in pathway costs and an average change in output. For example, the new pathway cost for our 100 developmental education starters (postintervention) may be $20,000, and the new output may rise to 15 units of output. The new adjusted pathway cost for the 100 students is $133,333, an improvement from the $150,000 shown earlier.

### Conclusion

This chapter provides an introduction to various ways of thinking about program costs and efficiency in community colleges. First, we discuss a method for determining the instructional expenditures of complete academic programs and note the profit or loss to the college depending on the
reimbursement rates for courses in particular disciplines. Understanding and comparing program costs using this method leads us to argue that colleges ought to think about managing enrollment, consolidating programs, growing enrollment, and redesigning curriculum as tools to manage costs. We then extend the program cost model to determine the costs for actual student pathways. We compare pathway costs for students in different academic programs or different college-readiness levels. We also adjust these pathways’ costs for an output measure, which allows us to compare the production efficiency among programs.

It is important to highlight some limitations and risks of looking at program and pathway costs in this way. First, as noted earlier, it is not possible to accurately measure the noninstructional costs that are incurred by students. Better ways of measuring these are necessary in order to improve management of noninstructional spending. Second, the model is explicitly limited by the way in which a college performs accounting and budgeting. In our example, all courses in a department have the same cost per credit hour, but we know this is not true. Additional budget data would allow, for example, for lower level and introductory courses to be less expensive than for higher level and specialty courses within a discipline. Third, there are no clear guidelines for measuring output in the adjusted pathway cost models. We use associate-degree equivalents as an example, but output determinations should reflect the key outputs that the college is responsible for producing. There are many different ways to achieve this.

Suggestions for Practitioners

Measuring cost for courses, programs, and pathways is simply a way of estimating efficiency and effectiveness across programs at a given college. Although institutions of higher education may not like to see themselves as businesses with profit and loss statements, they cannot afford to lose money on every student in every program. They need to have a balance of cost across disciplines and courses. For colleges interested in studying the costs of courses and programs, the following suggestions are made.

1. Establish unit-record-level costs (by student by credit hour) for courses and programs and share it with midlevel instructional administrators (program, department, and division chairs/directors). By identifying and analyzing cost, people begin to understand it. Once it is understood, changes might be more easily made.
2. Be aware that faculty may not share an interest in reducing cost. They may also be concerned that many high-demand low-cost courses such as general education courses subsidize high-cost programs like nursing and engineering.
3. Use cost data as one indicator of the need for program revitalization, enrollment management planning, and marketing strategies.
The quickest way to reduce cost is to modestly grow enrollment in courses and programs (increases the divisor for cost), and to move students through programs while using proportionately less resources (sharing labs and lab equipment, for example).

4. Compare cost over multiple years to see if it improves.

5. Identify key student types and pathways where costs vary greatly, such as developmental students, undeclared majors, part-time students, and online students. Students may complete courses in any given semester, but their persistence to key milestones (e.g., completion of college-level math and English, accumulation of 15 or 30 credits) may be much lower than other student groups.

In this day of performance-based and completion-based funding, a pathway cost analysis can help a college understand where it is losing students and who is enrolling but not progressing. Once accepted, cost data can contribute to the increasingly important conversation around student success at any college.

References


**TERRI M. MANNING** is the associate vice president of Institutional Research and founder of the Center for Applied Research at Central Piedmont Community College, Charlotte, NC.

**PETER M. CROSTA** is the director of research at 2U, Inc., headquartered in New York.
## San Jose-Evergreen Community College District
### SB 361 Allocation FUND 10
#### 2016/17 Adopted Budget

**SIMULATION # 7 (3 YR. AVG ACTUAL FTES)**

<table>
<thead>
<tr>
<th>REVENUE TO BE DISTRIBUTED</th>
<th>SJCCD 3YR AVERAGE TOTAL/CREDIT, NON-CREDIT &amp; NR (13/14; 14/15; 15/16)</th>
<th>SICC 3-YR AVERAGE FTES</th>
<th>EVC 3-YR AVERAGE FTES</th>
<th>SJCC Allocation</th>
<th>EVC Allocation</th>
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<th>WFI</th>
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<td>CR &amp; NC (RFTES)</td>
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**Property taxes**

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<td>Secured</td>
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<td>Supplemental Secured</td>
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<td>RDA Residual Payments</td>
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**BASIC ALLOCATION**

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<td>Workforce Institute</td>
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**Property Tax Distributed per RFTES**

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**Total Non-Campus Generated Revenues Allocated**

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<tbody>
<tr>
<td><strong>Total Non-Campus Generated Revenues Allocated</strong></td>
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**Other Revenues**

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<td>Mandated Cost</td>
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<td>Lottery</td>
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<td>Interest</td>
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<td>Other State Income</td>
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<td>Other local Income</td>
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<td>Property Rental</td>
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<td>State Reimbursed Cost</td>
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<td>Use of Facilities</td>
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<td>Other Financing Sources</td>
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<td><strong>Total Other Distributed per FTES</strong></td>
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**Total Non-Campus Generated Revenues Allocated**

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<tbody>
<tr>
<td><strong>Total Non-Campus Generated Revenues Allocated</strong></td>
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**Net Allocation**

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<tr>
<td><strong>Net Allocation</strong></td>
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**Revenue per FTES**

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<td><strong>Revenue per FTES</strong></td>
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**Plus College Generated Revenue**

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<tr>
<td>Instructional materials fees</td>
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<td>Enrollment fees int'l students</td>
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<td>Enrollment fees residents</td>
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<td>Enrollment fees non-residents</td>
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<td>Parking fees</td>
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<td>Other local income</td>
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<td>B.O.G. (2% Admin Fee)</td>
<td>$118,715</td>
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<td>Federal MAA Program</td>
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<td>Other financing sources</td>
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**Total Revenue + College Revenue**

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<tr>
<td><strong>Total Revenue</strong></td>
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**Net Allocation + College Revenue**

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<td><strong>Net Allocation + College Revenue</strong></td>
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**Revenue per FTES**

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<tbody>
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<td><strong>Revenue per FTES</strong></td>
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**Less Expenditure Budget**

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<tbody>
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<td><strong>Expenditure per FTES</strong></td>
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**Balance/Deficit**

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### Control Numbers (from Adopted Budget Document)

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<td>Expenditures in Adopted Budget</td>
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<tr>
<td>Deficit</td>
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Attachment B

RAM Taskforce Variables

1. Base Allocation based upon FTES for college and services allocations
2. Overhead cost of CTE Programs (Program cost analysis) and Percentage of Academic Programs Traditional vs. CTE
3. Amount of Non-Credit Programs
4. Equity Matrix/Equity Lens
5. Athletic Programs
6. Graduation Rate, Persistence Rate, Attrition Rate
7. Number of conferred Degrees and Certificates (output), and gross square footage and assignable square footage, including grounds.
8. Training and Staff Development - Priority Tier 4
10. Special programs EOPS, DSPS - Priority Tier 4
11. Total Cost of Ownership
13. How do we support categorical and grants (staffing, processing, activities)
14. What support was added and how will new funds and initiatives help enrollment (strong workforce, adult ed., noncredit, dual enrollment..)
15. Cost of administration, instruction, services by entity
16. Discretionary funding – how much is for keeping the lights on
Total Cost of Ownership Plan

Los Angeles Community College District

Purpose

Understanding the actual cost of maintaining and operating a building is essential to the economic viability of an organization. This plan explores these costs and defines a process for establishing the true cost of additional space.

Background

In 2001 the Los Angeles Community College District launched a massive building program. The goal was to renovate, replace and add structures to the existing colleges, satellites and acquired properties.

Over the years, there have been several external factors that have had an influence on the direction of the program. Probably the most notable is the downturn in the economy. The recession has caused the State to drastically reduce the District’s operational funding and eliminate the Scheduled Maintenance Program (SMP) funding a.k.a. deferred maintenance funding. As a result the District has had to reduce its class offerings, creating a reduction in the number of Weekly Student Contact Hours (WSCH). This has a direct correlation to the amount of space needed. It reflected in the State’s Capacity-to-Load Ratios (CLR). The CLR is expressed as a percentage. CLRs of less than 100% support the justification for additional construction; CLRs over 100% indicate the capacity of space exceeds the amount needed.

Since the inception of the building program, the assumption based on the economic growth of the area, was that the District would need to add more square footage to serve more students. In 2011 the District decided to pause the starting of new construction projects pending a review of the funding available for the cost of owning and operation the proposed additional square footage. This would lead to the development of the District’s “Total Cost of Ownership Plan”.
Plan

The total cost of ownership is addressed by thoroughly reviewing the status of existing and proposed facilities, benchmarking of existing facilities operations, and developing processes to measure, monitor and control both facilities costs and utilization.

1. Review of the current building plans and existing square footage (Appendix A). Three major areas of concern were identified by the initial analysis. They are building program (capital) budget, space utilization requirements, and the maintenance and operations (operational) budget.
   a. Building program budget – Review of the current forecast for the bond program, focusing on potential shortfalls in capital project budgets.
   b. Space utilization requirements – Review of the size, quantity and type of remaining facilities that should be constructed. Examine the current Capacity-to-Load Ratios.
   c. Maintenance and operations budget – Develop staffing levels for both custodial and maintenance operations based on APPA (Association of Physical Plant Administrators) standards. Review the maintenance and operational budgets to insure there is adequate funding to support the additional square footage.

2. Review and benchmark maintenance and operation expenditures (Appendix B).
   a. Review of salaries, benefits, utilities, equipment and supplies, vehicles and other expenditures for maintenance and operations.
   b. Cost Study Comparison between colleges.

3. Review APPA standards and quality expectations and compare with the custodial and maintenance staffing levels for each college (Appendix C).

4. Review the change in square footage per college per project for the next three years. Transform this information into projected maintenance and operation costs (Appendix D).

5. Review utility expenditures per square foot per college (Appendix E).
6. Develop deferred maintenance/scheduled maintenance fund to replace the now defunded State Scheduled Maintenance Program. In 2012 the Board of Trustees authorized a Deferred Maintenance Reserve Fund of up to 2% of the Unrestricted General Fund (Appendix F).
   a. Develop criteria for the newly developed deferred maintenance reserve.
   b. Prioritize college projects for the use of the deferred maintenance reserve.

7. Implement a new Computerized Maintenance Management System (CMMS). This system will allow for improved tracking of facilities expenses (Appendix G).
   a. Establish project goals and objectives for the CMMS.
   b. Review benefits of improved facilities tracking processes.

The combination of all of these elements will provide a comprehensive look at what it will cost the district to both own and operate district facilities.
THE TOTAL PACKAGE

Typically, the largest and most significant facilities’ efforts are focused on getting a building up and running in the first place. However, these projects then take on a long and permanent life of their own—with costs that far exceed initial design and construction. Some colleges and universities are turning to a total cost of ownership (TCO) model that factors in the additional maintenance and replacement costs that make for more realistic plans and forecasts.

By Apryl Motley

With the supply of physical space often too scarce, too plentiful, or incorrectly allocated, campus leaders take different views on ways to assign resources. There's the faculty chair, for example, who makes the case for constructing a state-of-the-art research lab; or the alum who specifically earmarks donated funds for a new recreation center; or the student who thinks all study areas should include Wi-Fi for every conceivable device; or the chief business officer who wonders if it's cost-effective to maintain older buildings with outdated heating and cooling systems.

Having no shortage of competing priorities with which to contend, some institutions have begun the search for a more precise answer to this question about the costs for constructing, maintaining, and renovating facilities over both the short- and long-term.

In a 2007 APPA publication, Buildings... The Gifts That Keep on Taking, primary author Rodney Rose, strategic consultant, STRATUS—a Heery Company, and past president of the Society for College and University Planning (SCUP), states: "The common thread among all of these [facilities-related] issues is that facilities decisions must be cast in light of their value as an investment. Usually the discussion of facilities is focused primarily on costs, especially initial costs. And the lengthy and complex process of planning, designing, and building facilities—which can take many years for complex projects—results in unforeseen changes and frustration along with the anticipation of finally getting something new built. Thus, the cost of facilities blurs their value."

One workable solution for clarifying project investment over time is the total cost of ownership (TCO) model, which E. Lander Medlin, executive vice president of APPA, says "takes into account all the costs of the facility and not just the first costs of construction, which institutions generally have a handle on." (For an overview of the total cost of ownership approach, see "Teaming Up on a Total Cost Model," in the November 2013 Business Officer.)

The approach focuses on disciplined management of three categories of costs: planning, designing, and construction; maintenance and operations; and renovation/recapitalization. According to Medlin, these costs account for 27 percent, 40 percent, and 33 percent, respectively, of the total costs associated with building and managing a facility. (See sidebar, TCO Components and Costs, for more detail.)

For colleges and universities, it's increasingly critical to monitor all facets of cost for maintenance, operations, and recapitalization. "TCO is the best tool for them to use to reduce overall maintenance costs and capital costs," says Doug Christensen, president of Christensen Facilities Group LLC. "It will help them to make better decisions about overall asset management. In general, higher ed over-maintains buildings," he explains. "You could have replaced them three times for what you were spending to maintain them."

Christensen retired from Brigham Young University (BYU), Provo, Utah, where he says TCO practices have been in place for almost 20 years. However, for most institutions, it is a relatively new concept that will require leaders to make significant shifts as well as foster more integrated approaches to facilities management.

TAKING ON TCO

"Our model looked at expenses separately, whereas TCO integrates all costs," says Steve Peary, former associate director for facilities management at the University of Maine, Orono. Currently serving as assistant director of innovation at the University of Vermont, Burlington, Peary says, "Traditionally the way organizations work is to focus on funds to build—but not maintain and renew—physical assets, which typically end up costing twice as much as the original cost of the facilities."

Last year, the University of Maine, with an enrollment of more than 11,000 undergraduate and graduate students, began work to implement TCO as a part of its overall strategic planning process, which will mean thinking differently about budgeting for new facilities. "If we're going
to ask for funds to build a new $20 million building, for example, we need to raise at least $40 million more to account for maintenance and renewal of that asset. This approach hasn’t always been practiced at public institutions,” Peary says, “but total cost of ownership is changing our perspective about facilities master planning.”

Ana K. Thiemer, renovation and renewal project manager at the University of Texas, Austin, understands the shift in thinking. “Facilities professionals are often driven to maintain a system at all costs, keeping it working for as long possible,” she says. “You have to look at whether that’s the best way to manage that asset’s performance. You may think that you’ve saved a ton of money, when you’ve actually spent more money than if you’d replaced the building.”

During the past four years, Thiemer and others at the university have put processes in place to implement TCO. Medlin says such processes are imperative: “It’s important that higher education institutions get better at TCO, because as space planning and utilization become increasingly significant, leaders will need to make data-driven decisions based on how effectively they are using their facilities.”

FULL CIRCLE

“You really want to know the total costs, from the birth of the building to its death,” Medlin asserts. “TCO goes beyond an inventory of your space,” she continues. “It involves developing and using a more sophisticated set of metrics to determine how the facility is being used and whether it’s being used effectively.”

“You’re tracking data,” Randy Ledbetter, president of R. Ledbetter & Associates, says. “For example, an asset was supposed to last 20 years, but it’s deteriorating at 10 years. If you’re reviewing data on a regular basis, you’ll know something is off track, and you will be able to take appropriate action so that your overall costs will go down over time.”

“In reality you’ve got an ongoing look at what it is really costing you to maintain that asset as you do your daily work,” says Christensen. “However, TCO requires ongoing discussion of long-term needs and costs to maintain assets. The senior facilities director collects data and shares it with the CBO. Those two should then sit at the table with the institution’s administration and board on a regular basis.”

Effectively managing both people and processes is critical to successfully implementing a total cost of ownership approach. Here’s a closer look at the progress the University of Maine and the University of Texas, Austin, have made in applying this cost model on their campuses.

PLANNING STRATEGICALLY

“Our catalyst for going into TCO at the University of Maine was the preliminary discussion of the university’s new strategic planning effort, which began late last year,” Peary says. “One aspect of the plan is dedicated to the revitalization of buildings and physical spaces.”

In fact, the five-year strategic plan, “The Blue Sky Project: Reaffirming Public Higher Education at Maine’s Flagship University,” specifically references “a total cost of ownership approach to managing UMaine’s $1 billion dollar infrastructure and real estate,” and the university is in the process of developing plans to incorporate TCO into the management of the university’s asset portfolio to ensure a comprehensive and aligned framework for facilities management.

The university got a boost last summer, when the estate of Thomas P. Hosmer, who graduated from the university in 1958, gave the University of Maine Foundation a $7.9 million gift to primarily support maintenance projects at the university. More than 90 percent of the gift is designated for the Thomas P. Hosmer Fund, an endowed fund established at the foundation in 2005 to provide supplemental income for maintenance and repairs that would not otherwise be completed due to budget limitations.

While university leadership and financial resources are both behind TCO, Peary notes that institutions need more time to realize measurable benefits. “Since it’s fairly early in the process and involves buildings with longer life cycles, there are few significant fiscal benefits yet,” he says, “but bringing clarity and awareness to facilities management decision making will lay the foundation for a more sustainable future.”
MANAGING MAINTENANCE

"Our campus is aging," Thiemer says. "Most of our buildings were built in the 1970s, but we have a very strong recapitalization program. We've really excelled in that area."

However, the university has not been as effective in monitoring maintenance costs. "We didn't have the tools to do predictive modeling for maintenance," Thiemer says. "Information wasn't being passed between or among departments, and we didn't have the necessary business processes in place to facilitate this."

"Recapitalization can be housed in one area, but maintenance is much bigger and broader and more difficult to reel in," she continues. "However, the bottom line was we were under budget constraints, and we were trying to decide how to fund and manage all our assets."

Thiemer offers this example to illustrate why it's imperative to monitor maintenance costs more closely: "I have a system that has a life cycle of 10 years, and the first cost of the system is $50,000. In 10 years, I need to spend another $50,000 to replace it."

"If you're not tracking maintenance calls and in year two of the system you have spent 60 percent of that replacement amount on maintenance, then you have overspent. That's where TCO comes in. You can monitor and track what's happening in maintenance and operations [M&O] and compare it to what you planned to spend. This kind of tracking should drive just-in-time replacement for that asset, and you'll be able to see if you need to replace it much sooner."

Three years ago, the university began requiring that all work orders be tied to an asset. Thiemer believes making changes like that has created "greater awareness of costs" and helped "maximize our budget to the fullest. Instead of making guesses about things, our decision making is smarter and more data-driven," she says. "For instance, in terms of M&O, there's substantial data that shows that we've moved to an 80/20 split between preventive maintenance and trouble calls."

Getting data and putting processes in place for departments to share that information has been at the heart of the university's TCO effort. "We don't have a formal TCO program per se. It's more of an internal grassroots effort, which has been a more effective approach," Thiemer says. "In this way, implementing TCO is more from the bottom up in terms of sharing information and understanding how others use it."

A FOUNDATION FOR THE FUTURE

"In terms of long-range planning for the institution, having a seat at the table in asset management will be important for facilities managers and CBOs, as well having access to accurate information to provide to various stakeholders," Thiemer says.

"Not all facilities are created equal," adds Medlin. "For example, if I am going to focus on developing academic programs for five specific majors, I would consider the appropriate facilities as well, and put my money there."

While the benefits of implementing the total cost approach seem evident, Ledbetter acknowledges that "it's a little overwhelming to get started." He suggests breaking the process down into manageable pieces: "Start with your new buildings or most valuable assets. Once you have your data warehouse set up, you can expand it."

"Institutions have the data they need to implement TCO, but it's in a lot of different places," Ledbetter says, "which may be more cumbersome and slow, but I wouldn't let that stop me from getting started. If necessary, TCO can be done on an Excel spreadsheet."

Whether your technology tools are basic or more sophisticated, Christensen says, "your whole facilities department will become an asset management group. They start becoming the critical factor in what assets are maintained and replaced."

APRYL MOTLEY, Columbia, Maryland, covers higher education business issues for Business Officer.

TCO COMPONENTS AND COSTS

"The ultimate question for CBOs is this," says E. Lander Medlin, executive director of APPA, "are we getting full value from the investments we make in our facilities portfolio? The answer resides in a greater institutional understanding of the expenditures throughout the facilities life cycle."
TCO Proposal Help Notes

Step 1: TCO Proposal Cover Sheet

Please fill out the narrative Cover Sheet.

Step 2: TCO Budget Estimator Worksheet (Expenses Tab)

To calculate your expenses, you need to do the following: Please insert the cost of personnel (salaries and benefits) from rows 4 through 19.

For Classified Personnel:

A. For classified personnel, go to the FC Classified Titles and FC Classified Salary Schedule. As an example, we are using the mid-range salary for Range 37 or $3,273. Multiply the salary ($3,273) by 12 to determine the annual salary of $39,276.

B. Under the “Benefits” tab, you will look for the FR-TOT and multiply the annual salary of $39,276 by the Classified FR-TOT or .494 = $19,402 total benefits.

C. Add the salary of $39,276 and the benefits of $19,402 to get the total cost. $39,276 + $19,402 = $58,678 total cost.

D. Under the “TCO Estimate” Tab, insert cost and benefits.

For Faculty:

A. Determine the Faculty Step (which is based on semester units). Please see the tab “FC FT Faculty Sal Schedule.”

B. As an example, we will use Step 7-D or $70,375.

C. See the “Benefit” Tab and use the FR-TOT for Faculty of 0.285.

D. Multiply the salary of $70,375 times the benefit of 0.285 to get the total benefits of $20,057.

E. Add the $70,375 salary and the total benefits of $20,057 to equal $90,432 total cost.

F. Under the “TCO Estimate” tab, enter cost and benefits.

Step 3: TCO Priority Sheet (Priority Tab of TCO Budget Estimator Worksheet)

Complete
From Clu"r Trade

Bigger school districts have more cost for each student which means the slope is negative for student cost.

Y = 1E+07x 0.4035

FES to $550s

R^2 = 0.4035

Upward curve

Students price of a day