Analyzing Costs Per Credit Hour

USE CASE #2 FOR EAB’S ACADEMIC PERFORMANCE SOLUTIONS TOOL

Note: This presentation corresponds to an excel file called “APS_Costs per sch analysis_111317.xlsx”
Outline / Overview

1. Defining costs per credit hour
2. Why use costs per credit hour as a metric?
3. What do we want to know about costs per credit hour?
4. An EAB-recommended method for analyzing costs per credit hour
5. Example analysis
6. Review and next steps
1. Defining Costs Per Credit Hour

At the department level, the costs that go into producing student credit hours (SCH) include:

- Instructional Salaries
- Non-Instructional Salaries
- Benefits
- General Operating Expenses

Therefore...

- **Cost per credit hour = departmental costs ÷ SCH awarded**
1. Defining Costs Per Credit Hour: 
*The Case for Focusing on Instructional Salaries*

In addition to being departments’ largest expenditure, instructional salary costs are somewhat flexible.

In other words, it is possible to reduce the cost of a credit hour by **redeploying instructional resources** in the following ways:

- Improving course completion rates
- Increasing course fill rates
- Consolidating unnecessary sections
- Increasing class sizes
- Increasing the number of courses taught by salaried faculty
2. Why use costs per credit hour as a metric?

It is easy to interpret.

Cost per credit hour is a simple and logical metric, and it is easily comparable across institutions. This makes it a desirable metric for making data-informed decisions about reducing costs.

We have access to benchmarking data.

EAB’s Benchmarking Data Report on Cost makes it possible to compare UWM departments’ costs to the costs of similar departments at other institutions. This allows us to avoid the pitfalls of holding every department at UWM to the same cost standard.
3. What do we want to know about costs per credit hour?

**How do we compare?**

How do UWM departments’ costs per SCH compare to the costs of similar departments at other institutions?

**What can we do?**

What can we do to reduce our costs?
4. An EAB-recommended method for analyzing costs per credit hour

**Measure**

- Compare departments’ instructional salary costs per SCH to those of the benchmarking cohort

**Diagnose**

- Compare departments to benchmarks for the following three “cost drivers”:
  - Unproductive Credits (Course completion rates)
  - Underfilled Sections
  - Instructional Load (Class size and instructor course loads)

**Act**

- Focus improvement efforts on areas where the department is falling short of the benchmark.

Source: EAB Webinar: A First Look at APS Cost Benchmarks (October 2017)
4. An EAB-recommended method for analyzing costs per credit hour: *Data Entry Template*

<table>
<thead>
<tr>
<th>Dept. Name</th>
<th>ALL APS Campuses</th>
<th>UWM</th>
<th>ALL APS Campuses</th>
<th>Median Section Fill Rate</th>
<th>Median Course Completion Rate (Lower Division Only)</th>
<th>Median Course Load for Tenured and Tenure-Track Faculty (Lower, Upper, and Graduate)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AP5 Cohort: High Research</td>
<td>UVM minus APS Cohort</td>
<td>AP5 Cohort: High Research</td>
<td>UVM minus APS Cohort</td>
<td>APS Cohort: High Research</td>
<td>APS Cohort: High Research</td>
</tr>
<tr>
<td></td>
<td>Comprehensives</td>
<td>UWM</td>
<td>Comprehensives</td>
<td>UWM</td>
<td>Comprehensives</td>
<td>UWM</td>
</tr>
</tbody>
</table>

*Risk Factors:*

- Potential Cost Driver #1: Unproductive Credits
- Potential Cost Driver #2: Understaffed Sections
- Potential Cost Driver #3: Inefficient Instructional Load (CAP II)

*Notes:*

- Median Course Completion Rate includes lower division courses only.
- Median Course Load includes tenured and tenure-track faculty.

*Data Source:*

- UW-Milwaukee Office of Assessment and Institutional Research
- AY2015 (benchmark), AY16 (APS)
4. An EAB-recommended method for analyzing costs per credit hour: Some Limitations

- Ongoing issue with fill rate data. (Should be resolved eventually.)
- Need for more discussion about how course loads are calculated.
- Need for more discussion about benchmarking data and goals.
- Method for estimating ROI is still under development.
5. Example analysis from a fictitious UWM department
**Example Department:**
Instructional Salary Costs Per Student Credit Hour

<table>
<thead>
<tr>
<th>UWM</th>
<th>Benchmark</th>
<th>Δ from Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>$250</td>
<td>$200</td>
<td>$50 higher</td>
</tr>
</tbody>
</table>

Found on Costs Tab of APS Platform

Found in APS Benchmarking Data Report

What factors are driving the difference between current performance and the benchmark?

Notes: Slides and analysis based on EAB’s APS Costs Benchmarking Webinar (October 2017). UWM’s benchmarking cohort is the “High Research Comprehensives cohort.”
**Example Department:** Exploring Possible Cost Drivers

<table>
<thead>
<tr>
<th>Measure</th>
<th>Diagnose</th>
<th>Act</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Unproductive Credits</strong></td>
<td></td>
</tr>
<tr>
<td>90%</td>
<td><strong>Median Course Completion Rate</strong></td>
<td>Lower division completion rate is 6% lower than the cohort benchmark.</td>
</tr>
<tr>
<td>2</td>
<td><strong>Underfilled Sections</strong></td>
<td></td>
</tr>
<tr>
<td>85%</td>
<td><strong>Median Section Fill Rate</strong></td>
<td>Section fill rate is equal to the optimal level of 85%.</td>
</tr>
<tr>
<td>3</td>
<td><strong>Instructional Load</strong></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td><strong>Median Class Size</strong></td>
<td>Median class size is 10 students lower than cohort benchmark.</td>
</tr>
<tr>
<td>2</td>
<td><strong>Collapsible Sections</strong></td>
<td>Very few section consolidation opportunities.</td>
</tr>
<tr>
<td>4</td>
<td><strong>Median Course Load</strong></td>
<td>Tenured and tenure-track faculty are teaching the same number of courses as the benchmark of 4.</td>
</tr>
<tr>
<td>1</td>
<td><strong>Single Section Courses With Low Fill Rate</strong></td>
<td>Only one single section course offered more than once per year with a fill rate of 50% or lower.</td>
</tr>
</tbody>
</table>

1/4/2018
**Example Department:** Crafting a Tailored Solution

<table>
<thead>
<tr>
<th>Measure</th>
<th>Diagnose</th>
<th>Act</th>
</tr>
</thead>
</table>

90%

**Median Course Completion Rate**
Lower division completion rate is 6% lower than the cohort benchmark.

- Focus on improving lower division course completion rates.

15

**Median Class Size**
Median class size is 10 students lower than cohort benchmark.

- Look into increasing class sizes.
What we’ve learned:

• We can use APS and EAB’s Benchmarking Data Reports to...
  ➢ Analyze costs per credit hour
  ➢ Discover opportunities to reduce costs per credit hour

• Doing this can help UWM use its resources more effectively.

Next steps:

• Look at other departments of interest.
• Use these analyses to make data-informed decisions that will help to reduce costs.
Appendix: Data sources for cost per credit hour analysis

All UWM-specific data come from APS (link)

Benchmarking data for instructional salary costs per SCH come from EAB’s Benchmarking Data Report on Cost (link)

Benchmarking data for course completion rates comes from EAB’s Benchmarking Data Report on Completion Rates (link)

Benchmark for section fill rate (85%) is a number EAB proposed in their costs per credit hour webinar (link). UWM can decide on a different benchmark if they want to.

Benchmarking data for class size comes from EAB’s Benchmarking Data Report on Class Size (link)

Benchmark for instructor course load is based on the median instructor course load for EAB’s High-Research Comprehensives benchmarking cohort, as reported in EAB’s costs webinar (link). EAB has not yet come out with a Benchmarking Data Report that has department-by-department figures.

Notes about how each item was operationalized for UWM appear in the notes section of the slides (available upon request).
Questions? Please contact us.

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