Academic Program Review

Touching the Third Rail of Higher Education Finance

Rick Staisloff, Principal

October 17, 2012
Webinar Objectives

- Use strategic cost and demand analysis for improved academic program decision making
- Learn how to implement program review best practice
- Create a change agenda that supports strategic reallocation
Managing the New Normal

Mission

Market

Margin
Living at the Intersection of Mission, Market and Margin:

Three Questions

What are we good at? (Mission)

What do people want? (Market)

How do we bring these together in a way that is true to our mission and generates resources? (Margin)
How should we respond to the external and internal environment?

1. Know where your economic engines are
2. Focus on mission/market/margin opportunities
3. Have the courage to reallocate
For successful academic portfolio analysis, institutions must be clear about the rules of the game
- How assessment will occur
- How the data and analysis will be used

Data can only be used effectively when seen in comparison to an appropriate benchmark group
Academic Portfolio Analysis - Tools

- Net Revenue
- Cost Structures
- Student Demand and Yield
- Scorecards
- Business Plan Pro Formas
Getting to Net Revenue

- An understanding of net revenue is an essential component of determining return on investment.

- Represents a key cultural shift in the move from “spending” to “investing”.

- Calculating net revenue requires:
  - Right General Ledger Structure
  - Cost Center Based Budgeting
### Net Revenue Modeling - By Division

<table>
<thead>
<tr>
<th>Division</th>
<th>Undergraduate</th>
<th>PT</th>
<th>Accelerated</th>
<th>Graduate</th>
<th>Institutes</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>15,686,486</td>
<td>2,481,446</td>
<td>3,999,994</td>
<td>10,266,637</td>
<td>464,207</td>
<td>32,898,770</td>
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<tr>
<td>Tuition Discounting</td>
<td>5,656,577</td>
<td>40,026</td>
<td>0</td>
<td>876,158</td>
<td>0</td>
<td>6,572,761</td>
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<tr>
<td>Discounted Revenue</td>
<td>10,029,909</td>
<td>2,441,420</td>
<td>3,999,994</td>
<td>9,390,479</td>
<td>464,207</td>
<td>26,326,009</td>
</tr>
<tr>
<td>Total Discount %</td>
<td>36.06%</td>
<td>1.61%</td>
<td>0.00%</td>
<td>8.53%</td>
<td>0.00%</td>
<td>19.98%</td>
</tr>
</tbody>
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<tr>
<td>Direct Costs</td>
<td>8,284,316</td>
<td>1,277,669</td>
<td>1,554,435</td>
<td>2,874,851</td>
<td>347,933</td>
<td>14,339,204</td>
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<td>Net Revenue</td>
<td>1,745,593</td>
<td>1,163,751</td>
<td>2,445,559</td>
<td>6,515,628</td>
<td>116,274</td>
<td>11,986,805</td>
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<tr>
<td>Net Revenue %</td>
<td>17%</td>
<td>48%</td>
<td>61%</td>
<td>69%</td>
<td>25%</td>
<td>46%</td>
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<tr>
<td>Total Direct and Allocated Cost</td>
<td>9,954,583</td>
<td>2,366,828</td>
<td>3,149,668</td>
<td>7,858,580</td>
<td>347,933</td>
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<td>Net Revenue</td>
<td>75,326</td>
<td>74,592</td>
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<td>Net Revenue % - FY 2010</td>
<td>0.8%</td>
<td>3.1%</td>
<td>21.3%</td>
<td>16.3%</td>
<td></td>
<td>10.1%</td>
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<td>Net Revenue % - FY 2009</td>
<td>2.1%</td>
<td>18.8%</td>
<td>28.8%</td>
<td>25.0%</td>
<td></td>
<td>16.5%</td>
</tr>
<tr>
<td>Net Revenue % - FY 2008</td>
<td>5.5%</td>
<td>23.0%</td>
<td>20.0%</td>
<td>25.0%</td>
<td></td>
<td>16.0%</td>
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Net Revenue - Sample Analysis

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The undergraduate program appears profitable when measuring gross revenue.

But is barely breaking even when measuring net revenue.
Net Revenue – Pitfalls to Avoid

- Remember that you are creating a model, and that no model is perfect.
- Failed attempts at calculating net revenue typically result from over complication of allocation formulas – keep it simple.
Getting to Net Revenue

- Cross Subsidies:
  - Almost all institutions have subsidized academic programs
  - Cross subsidies are not bad, however institutions need to be more transparent about where they occur
  - When determining the appropriateness of a subsidy, institutions should consider:
    - Program’s relation to mission
    - How long the subsidy should occur
    - Amount of the subsidy
Understanding Academic Cost Structures

1. Question - Are departmental costs higher or lower than the benchmark group?
   Metric - Cost per unit - Student Credit Hour and Full-time equivalent

2. Question – Is the department more or less efficient?
   Metric - Throughput – Student credit hours generated by each faculty member
Sample Metric - Direct Instructional Expenditure per FTE Student

- $12,000
- $10,000
- $8,000
- $6,000
- $4,000
- $2,000
$0
+$2,000
+$4,000
+$6,000
+$8,000
+$10,000
+$12,000

Less efficient than market standard

More efficient than market standard

Source: Delaware Instructional Cost Study

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Sample Metric - Direct Instructional Expenditure per FTE Student

Less efficient than market standard

More efficient than market standard

Departments are compared to similar departments nationally, not to each other

Source: Delaware Instructional Cost Study
Sample Metric - Direct Instructional Expenditure per FTE Student

The distance from the normed line determines whether departments are more or less expensive.

Less efficient than market standard

More efficient than market standard

Source: Delaware Instructional Cost Study

Used by permission rpk GROUP
Sample Metric - Direct Instructional Expenditure per FTE Student

English is less cost effective

Less efficient than market standard

More efficient than market standard

Nursing is more cost effective

Source: Delaware Instructional Cost Study
Cost Effectiveness

- Once they determine the relative cost effectiveness, institutions can identify departments for additional focus and drill down to determine why cost structures vary.

- Key areas of focus for the drill down include:
  - Labor Costs as a % of Total Department Costs
  - Mix of Full-time and Part-time faculty
  - Mix of faculty rank
  - Average SCH taught by FTE faculty (throughput)
  - Average class size
Sample Metric - Student Credit Hours per FTE Faculty

More efficient than market standard

Less efficient than market standard

Source: Delaware Instructional Cost Study

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Student Credit Hours per FTE Faculty

More efficient than market standard

Less efficient than market standard

Departments are compared to similar departments nationally, not to each other

Source: Delaware Instructional Cost Study

Used by permission rpk GROUP
Student Credit Hours per FTE Faculty

Nursing and Education generate more SCH per FTE Faculty

More efficient than market standard

Less efficient than market standard

Source: Delaware Instructional Cost Study

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Tapping Into Student Demand

- Which programs house most of the institution’s students?

- How well am I responding to market demand?
  - Current academic portfolio
  - Untapped opportunities

- What is my student yield, particularly within high demand programs?
Undergraduate Students by Major - Fall 2011

Students in these 15 majors represent 44.9% of all undergraduate students.
What Drives Student Activity?

- Education: 1,903 students
- Business: 1,903 students
- Pharmacy: 1,330 students
- Nursing: 1,227 students
- Religious Studies: 904 students
- Communication Arts: 813 students
- English: 799 students
- Modern Foreign Language: 799 students
- Philosophy: 798 students
- Psychology: 786 students
- Math: 667 students
- CHM: 4% of total
- HIS: 4% of total
- CST: 4% of total
- PHY: 4% of total
- PED: 4% of total
- ART: 4% of total
- MUS: 6% of total
- POL: 7% of total
- HSV: 9% of total
- 24
What Drives Activity?

- CHM
- HIS
- CST
- PHY
- PED
- ART
- MUS
- POL
- HSV
- Math
- Psychology
- Philosophy
- Modern Foreign Language
- Communication Arts
- English
- Religious Studies
- Biology
- Nursing
- Pharmacy
- Business
- Education

- Anchor
  4 Programs = 57%
- Core
  8 Programs = 32%
- Other
  9 Programs = 11%

- Total: 6,991
- CHM: 1,903 (27%)
- HIS: 904
- CST: 786
- PHY: 798
- PED: 799
- ART: 813
- MUS: 861
- POL: 873
- HSV: 904
- Math: 667
- Psychology: 786
- Philosophy: 798
- Modern Foreign Language: 799
- Communication Arts: 813
- English: 861
- Religious Studies: 873
- Biology: 904
- Nursing: 1,227
- Pharmacy: 1,330
- Business: 1,903
- Education: 6,991

Each 2% or < 2%.
What Drives Activity?

Top 12 programs account for 89% of credit hours:

1. Nursing
2. Biology
3. Religious Studies
4. Pharmacy
5. Education
6. Business
7. Communication Arts
8. English
9. Modern Foreign Language
10. Philosophy
11. Math
12. Psychology

Programs:
- CHM
- HIS
- CST
- PHY
- PED
- ART
- MUS
- POL
- HSV
- ART
- POL
- HSV
- CHM
- HIS
- CST
- PHY
- PED
- ART
- MUS
- POL
- HSV

Anchor 4 Programs = 57%
Core 8 Programs = 32%
Other 9 Programs = 11%

Each 2% or <
Demand in the Market

- In order to drive revenue from tuition and fees (and indirectly from auxiliaries), we must understand student demand in the market.
- The following analysis assesses the highest level of student interest – at the time of inquiry.
90% of prospects originate from the top 12 majors.

<table>
<thead>
<tr>
<th>Major</th>
<th>Prospects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engin</td>
<td>1,217</td>
</tr>
<tr>
<td>Engl</td>
<td>1,805</td>
</tr>
<tr>
<td>Crim</td>
<td>2,267</td>
</tr>
<tr>
<td>Art</td>
<td>2,786</td>
</tr>
<tr>
<td>Com</td>
<td>3,627</td>
</tr>
<tr>
<td>Pl.Sc</td>
<td>4,093</td>
</tr>
<tr>
<td>Educ</td>
<td>4,316</td>
</tr>
<tr>
<td>Psy</td>
<td>4,476</td>
</tr>
<tr>
<td>Nurs</td>
<td>5,377</td>
</tr>
<tr>
<td>Chem</td>
<td>5,895</td>
</tr>
<tr>
<td>Bus</td>
<td>6,374</td>
</tr>
<tr>
<td>Bio</td>
<td>10,681</td>
</tr>
</tbody>
</table>

Total prospects by major: 30

Median: 1,169
Student demand can also be measured at the point of application, acceptance and attendance.

By tracking student demand, we can determine how well we are capturing the market that is already aware of the University, and the programs and majors that are attracting student attention.
Student Yield

- Student yield indicates what percentage of interested students actually end up attending the University.
- As with demand, yield can be measured at various milestones in the enrollment process – inquiry, application, acceptance and attendance.
Yield – Percentage of Accepted Students Who Attend

Median 33%
# of Prospects vs. Yield (accepted to enrolled)

- **High # Prospects/Low Yield**
  - Bio: 10,681
  - Elevate Yield

- **Low # Prospects/Low Yield**
  - Internet
  - Mod For Lang
  - Internat
  - Math
  - Rel Study
  - Median Yield: 33%

- **High # Prospects/High Yield**
  - Bus
  - Maximize
  - Chem
  - EDU
  - Art
  - Crimin

- **Low # Prospects/High Yield**
  - Engin
  - Comp Sci
  - History

- Median # Prospects: 1,169
- Low Prospects: 0%

- Median Yield: 33%
- Low: 162
# of Prospects vs. Yield (accepted to enrolled)

- **High # Prospects/Low Yield**
- **High # Prospects/High Yield**
- **Low # Prospects/Low Yield**
- **Low # Prospects/High Yield**

**Median**
- **Yield**: 33%
- **Prospects**: 1,169

**Bio**
- 10,681

**Bus**
- Nursing
- Psych
- Pol Sci
- Comm
- English

**EDU**
- Nursing
- Psych
- Pol Sci
- Comm
- English

**Nursing**
- Psych
- Pol Sci
- Comm
- English

**Psych**
- Pol Sci
- Comm
- English

**Comm**
- English

**Chem**
- EDU
- Art
- Nursing
- Psych
- Pol Sci
- Comm
- English

**Engin**
- EDU
- Art
- Nursing
- Psych
- Pol Sci
- Comm
- English

**Comp Sci**
- EDU
- Art
- Nursing
- Psych
- Pol Sci
- Comm
- English

**Ideally, Universities will maximize the number of high demand and high yield programs**
A review of an academic program involves multiple variables, both qualitative and quantitative.
Scorecard variables could include data such as:

- Relation to mission
- Market Demand
- Student Yield
- Retention and Graduation Rates
- SCH Generation
- Efficiency
- Net Revenue
# Sample Academic Program Review Scorecard

<table>
<thead>
<tr>
<th>Program</th>
<th>Mission</th>
<th>Demand</th>
<th>Conversion</th>
<th>Contribution</th>
<th>Efficiency</th>
<th>Net Revenue</th>
<th>Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Yes</td>
<td>&gt; 5,000</td>
<td>&gt;33%</td>
<td>&gt; 1,000</td>
<td>Above Benchmark</td>
<td>Positive</td>
<td>Above Target</td>
</tr>
<tr>
<td>B</td>
<td>Yes</td>
<td>&lt; 1,000</td>
<td>&lt; 33%</td>
<td>&gt; 500</td>
<td>At Benchmark</td>
<td>Positive</td>
<td>At Target</td>
</tr>
<tr>
<td>C</td>
<td>Yes</td>
<td>&gt; 1,000</td>
<td>&lt; 33%</td>
<td>&gt; 500</td>
<td>Below Benchmark</td>
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<td>&lt; 500</td>
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Based on the scorecard review, programs can be placed into one of four categories:

- Grow
- Maintain
- Redesign
- Sunset
Untapped Market Opportunities

- In addition to increasing yield in high demand programs, institutions must also examine new market opportunities.

- Assessing the market
  - Current employers
  - Governmental sources
    - Areas of workforce shortage
    - Economic development agencies

- It is usually easier to begin by building on existing areas of strength

- Key question: Who owns business development at your institution?
Business Plan Pro Formas

- A more detailed analysis of proposed or existing academic programs can be provided through the use of pro formas
- Pro Formas project revenue and expense activity in order to determine start-up costs and return on investment
- Pro Formas also serve as an important accountability tool
Before financial analysis begins, programs should undergo the a review based upon:

- *Relation to mission*
- *Market analysis*
- *Competition*

- This analysis should be test externally through peer review and dialog with local employers
A pro forma analysis should include the following:
- At least two years of actual and three years of projected data
- Enrollment
- Revenue
- Expense
- Analysis of program start-up costs and break even requirement
Business Pro Formas – What’s In It For Me?

- Pro Forma analysis benefits academic departments
  - Sets an expectation for analysis. Departments must do their homework before proposing investments.
  - Creates milestones throughout the process. Departments need only complete one step at a time. For example, if relation to mission, market demand and competition are not positive, there is no need to move forward with revenue and expense projections.
  - Once the review is completed, the pro forma should flow easily into the budget process. In this way, resources are identified up front to support the program.
  - Pro forma analysis builds accountability by projecting enrollment, setting resource requirements and the expected return on investment.
Successful Academic Portfolio Review

- Communicates the rules of the game up front
- Is based on data
- Benchmarks departments/programs
- Includes a mix of qualitative and quantitative factors
A Strategic Finance Agenda

1. Assess Data
2. Develop Metrics
3. Create Reinvestment/Innovation Pools
4. Reduce Admin and Operating Costs
5. Drive Revenue
6. Streamline Academic Program
7. Document and Communicate
To continue the dialogue . . .

- Rick Staisloff, Principal
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