Using Financial Aid Analytics to Overcome Enrollment Challenges
Frostburg, MD
Public, 4 year university
5300 students
88% Maryland residents
Shift from traditional 18 year old to transfer student
42% students of color
77% freshman-to-sophomore retention rate
Challenges

- Declining Enrollments
- Yield Declines
- Financial Aid
- Decreasing Revenue Implications
- Affordability
President’s Perspective & Goals
What is important in an analytics initiative?

- Transparency
- Accessibility
- Trust in the Data
Early Analyses

- Identifying enrollment trends
- Understanding market conditions and competitive landscape
- Identifying core student type, who actually enroll at Frostburg
- Identifying which students graduate in four years
Admissions Yield by County

WHAT’S IMPORTANT?

- Local students yield highest
- Metropolitan areas yield lower
- Highest population densities in Baltimore/DC corridor
Admissions Funnel

WHAT’S IMPORTANT?

- 2017 Declining applications
- Increasing admission rate
- Declining yield
Community Colleges are the largest competitors to Frostburg.

Staying within home county and going to a Community College suggests financial reasons.
**Approach**

1. How can we use financial aid strategically to increase yield and retention?

2. How does increasing total aid impact enrollment and net tuition revenue?
Goals for Using Financial Aid

1. Get more aid to more students to meet more need
2. Use institutional aid to reduce the financial burden on our core student
3. Have as many of the likely-to-graduate receive some type of aid
4. Want to get to the point where we are not leaving money on the table
Changes to Key Scholarship & Grant Offers

**WHAT’S IMPORTANT?**

- Increase in the number of need-based offers (Frostburg Grant)
- Need-based aid seemed to have largest impact
- Static yield for merit-aid recipients

**Scholarships/Grants Most Frequently Offered**

<table>
<thead>
<tr>
<th>Offer Type</th>
<th>Fall 2017</th>
<th></th>
<th>Fall 2018</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Students Offered Aid</td>
<td>Students Offered Inst Aid And Enrolled</td>
<td>Percent Offered Aid And Enrolled</td>
<td>Median Inst Offer Amount</td>
</tr>
<tr>
<td>Need-Based Offers</td>
<td>648</td>
<td>254</td>
<td>39%</td>
<td>$2,300</td>
</tr>
<tr>
<td>FSU Acad Need Scholarship</td>
<td>104</td>
<td>39</td>
<td>38%</td>
<td>$1,000</td>
</tr>
<tr>
<td>FSU Distinction</td>
<td>102</td>
<td>31</td>
<td>30%</td>
<td>$5,000</td>
</tr>
<tr>
<td>FSU Excellence</td>
<td>255</td>
<td>73</td>
<td>29%</td>
<td>$3,250</td>
</tr>
<tr>
<td>FSU Honor</td>
<td>592</td>
<td>167</td>
<td>28%</td>
<td>$1,000</td>
</tr>
<tr>
<td>Out-of-State Scholarships</td>
<td>74</td>
<td>25</td>
<td>34%</td>
<td>$4,000</td>
</tr>
<tr>
<td>Summit Scholarship</td>
<td>67</td>
<td>15</td>
<td>22%</td>
<td>$5,000</td>
</tr>
<tr>
<td>Grand Total</td>
<td>1,495</td>
<td>475</td>
<td>32%</td>
<td>$2,000</td>
</tr>
</tbody>
</table>
# Admissions Yield & Need-Based Offers

<table>
<thead>
<tr>
<th></th>
<th>Fall 2016</th>
<th>Fall 2017</th>
<th>Fall 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No Need-Based Offer</strong></td>
<td>1,447</td>
<td>1,295</td>
<td>1,096</td>
</tr>
<tr>
<td><strong>Yield</strong></td>
<td>74%</td>
<td>75%</td>
<td>74%</td>
</tr>
<tr>
<td><strong>Supports idea</strong></td>
<td>512</td>
<td>422</td>
<td>390</td>
</tr>
<tr>
<td><strong>Received Need-Based Offer</strong></td>
<td>375</td>
<td>412</td>
<td>563</td>
</tr>
<tr>
<td><strong>Yield</strong></td>
<td>54%</td>
<td>54%</td>
<td>62%</td>
</tr>
<tr>
<td><strong>Supports idea</strong></td>
<td>318</td>
<td>355</td>
<td>346</td>
</tr>
</tbody>
</table>

**WHAT’S IMPORTANT?**

- Yield increased when students were offered need-based aid.
- Supports the idea that students are attending local CC’s for financial reasons.
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How Should We Target Institutional Aid?

Yield Curve by Yield Class over Institutional Aid Offered
Groupings based on HS GPA, In/Out of State, and Campus Proximity.

What's Important?

- Admitted students can be grouped into likelihood to enroll buckets independent of financial aid offer
- Varying FA offers impact each buckets yield – Medium bucket is more sensitive to aid offer size
Almost half of offers were made to students not likely to enroll anyway.

High yield students are enrolling at a high rate even though they were not offered as much aid.

### Previous Aid Imbalance

<table>
<thead>
<tr>
<th>Yield Class</th>
<th>Admitted Student Count</th>
<th>% of Admitted Students</th>
<th>Total Institutional Aid Offered</th>
<th>% of Total Institutional Aid Offered</th>
<th>Median Institutional Aid Offered</th>
<th>Percent Enrolled (Yield)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH</td>
<td>321</td>
<td>13%</td>
<td>$739,984</td>
<td>14%</td>
<td>$2,000</td>
<td>51%</td>
</tr>
<tr>
<td>MEDIUM</td>
<td>1,136</td>
<td>47%</td>
<td>$1,986,530</td>
<td>37%</td>
<td>$2,000</td>
<td>32%</td>
</tr>
<tr>
<td>LOW</td>
<td>938</td>
<td>39%</td>
<td>$2,639,427</td>
<td>49%</td>
<td>$3,000</td>
<td>22%</td>
</tr>
<tr>
<td>Grand Total</td>
<td>2,395</td>
<td>100%</td>
<td>$5,365,941</td>
<td>100%</td>
<td>$2,000</td>
<td>31%</td>
</tr>
</tbody>
</table>
Unmet Financial Need

There is a strong effect of unmet need on retention.

A cliff exists above $5K and 50% unmet need.

WHAT'S IMPORTANT?

- Unmet Financial Need
  - 0% 78% Retention
  - 10% 83% Retention
  - 20% 81% Retention
  - 30% 73% Retention
  - 40% 71% Retention
  - 50% 69% Retention
  - 60% 60% Retention
  - 70% 50% Retention
  - 80% 31% Retention
  - 90% 0% Retention
  - 100% 0% Retention

- Retention
  - 77% Retention
  - 24% Retention!!!
The Importance of Need Based Aid

What's Important?

- We can target individual students and incorporate what we know about them to shift them into an area of greater retention likelihood.
Advanced Analysis

- **Goal**
  - More Effective Use of Financial Aid Dollars

- **How do we get there?**
  - What’s the effect of reallocating current aid?
  - What’s the effect of increasing total aid?

- **Considerations**
  - Total aid $$$
  - How many students are available in each bucket
  - Yield (overall, and for each bucket)
  - Institutional mission and goals
Model Overview

MODEL 1
Revenue optimization, fixed aid pool

MODEL 2
Aid Increase

MODEL 3
Targeted Aid Increase
Model 1: Increased revenue, same aid budget

WHAT’S IMPORTANT?

- Net Tuition Revenue increase of ~$185,000
- Institutional aid reductions to students with low unmet need
Model 2: Aid Increase

WHAT’S IMPORTANT?

- Increased institutional aid by 50%
- Average unmet need declined
- No shift to <$5K group
- Yield and Net Tuition Revenue unchanged from Model 1, despite 50% increase in aid
Model 3: Targeted Aid Increase

<table>
<thead>
<tr>
<th>Yield Group</th>
<th>Unmet Need &lt;$5000</th>
<th>Unmet Need &gt;$5000</th>
</tr>
</thead>
<tbody>
<tr>
<td>In State, High GPA</td>
<td>Low Offer</td>
<td>Low Offer</td>
</tr>
<tr>
<td>In State, Medium GPA</td>
<td>Medium Offer</td>
<td>Medium Offer</td>
</tr>
<tr>
<td>In State, Low GPA</td>
<td>High Offer</td>
<td>High Offer</td>
</tr>
<tr>
<td>Out of State, High GPA</td>
<td>Low Offer</td>
<td>Low Offer</td>
</tr>
<tr>
<td>Out of State, Medium GPA</td>
<td>Medium Offer</td>
<td>Medium Offer</td>
</tr>
<tr>
<td>Out of State, Low GPA</td>
<td>High Offer</td>
<td>High Offer</td>
</tr>
</tbody>
</table>

WHAT'S IMPORTANT?

- ~150-student increase based on unmet need
- Less dramatic increase in Net Tuition Revenue
Model Summary

**MODEL 1**
Revenue optimization
Redistributed Fixed Aid Pool, Increased Net Tuition Revenue

**MODEL 2**
Aid Increase
Increased Aid Pool, similar Revenue to Model 1

**MODEL 3**
Targeted Aid Increase
Aid Pool from Model 2, Increased Enrollment, Intermediate Revenue
Summary

- Importance of data access and models
- Incorporation of multiple sources of data to understand institutional challenges
- Actionable recommendations based on data
- Improvement as a cycle