Improving Student Satisfaction While Minimizing the Course Costs

based on the Insights from Regional Community College Student Enrollment and Evaluation Data.

Prepared by

Anand SR

Executive Summary

Over the past several terms, Regional Community College has collected rich data on student enrollment, demographics, course costs, and professor evaluation scores.

The central question for the board is straightforward but challenging:

How can we improve student satisfaction—measured through professor evaluation scores— without increasing course costs?
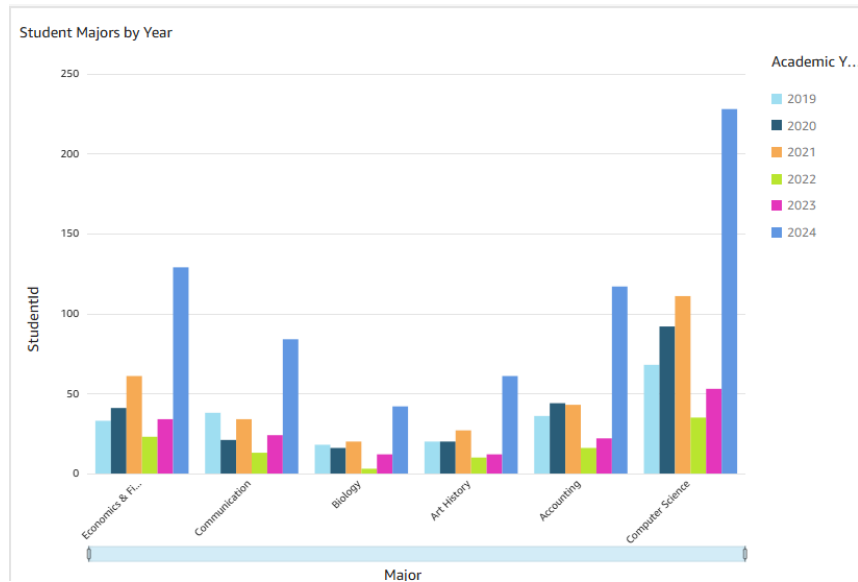
This analysis suggests that **selectively increasing class sizes in high-performing humanities courses** is a promising lever. These courses tend to deliver strong evaluation scores while maintaining costs per course comparable to, or lower than, other disciplines. By carefully expanding capacity where students are already highly satisfied, the college can boost overall student experience with minimal additional financial pressure.

In this data story, we will:

1. Describe the composition of the student body and their majors.

2. Examine how satisfaction varies across courses.

3. Examine how average cost per course varies across courses.

3. Compare evaluation scores with cost per course.

4. Develop a targeted recommendation to increase class sizes in specific humanities courses that already perform well.

Current Student Landscape

To design any intervention, we first need to understand **who our students are** and **where they are studying**. The dataset provides a detailed picture of majors, academic years, and the mix of youth and adult learners.

Student Majors by Year

The **Student Majors by Year** visual shows how enrollment is distributed across majors over time.
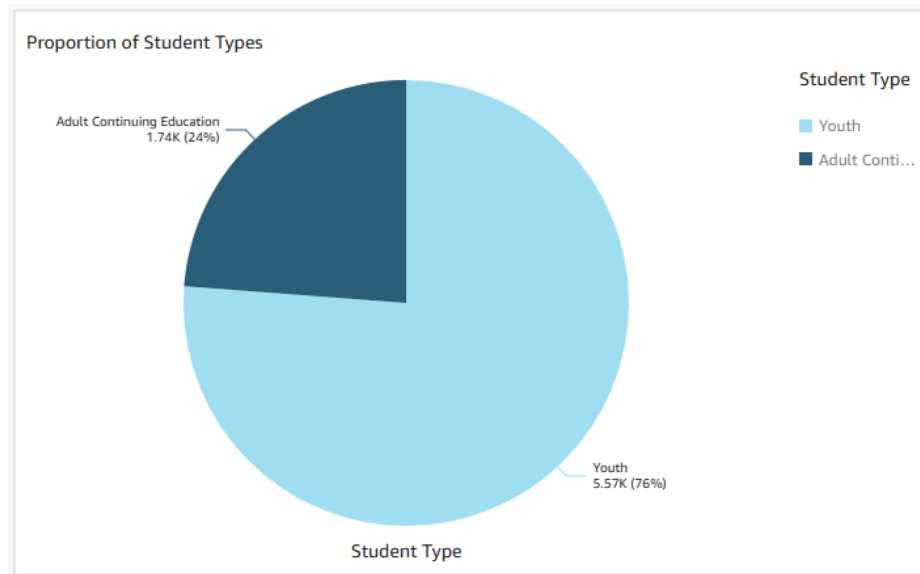
We see that:

- Some majors (including humanities fields such as English, History, or related disciplines in this sample) maintain a steady or growing enrollment across academic years.

- Other majors are more concentrated in specific cohorts, suggesting that demand is uneven across programs.

This pattern indicates that the college already has a solid base of students in certain humanities disciplines, providing a natural foundation for expanding capacity where satisfaction is high.

Student Population Segmentation

The **Proportion of Student Types** visual breaks down enrollment between **Youth** (students under 30) and **Adult Continuing Education** learners. Youth students make up a significant portion of the population, while adult learners also represent an important segment.

Proportion of Student Types

Adult Continuing Education
1.74K (24%)

Student Type
- Youth
- Adult Conti...

Youth
5.57K (76%)

Student Type

This mix matters when planning changes to class sizes:

- Youth students may be more responsive to course availability and schedule flexibility.

- Adult learners may prioritize course quality and alignment with work or family commitments.

Any recommendation should aim to support **both groups**, particularly in courses that already show strong satisfaction metrics.

Where Course Satisfaction Is Strongest?

Next, we examine how **student satisfaction**, captured by **Evaluation Score**, varies by course. We want to identify courses where students consistently report positive experiences.

Average of EvaluationScore by Course

The **Average Evaluation Score by Course** visual highlights which courses receive the highest average evaluations.

In this sample dataset, we observe that:

- Certain courses, many of them in humanities-related areas, cluster at the top of the evaluation scale.

- These high-scoring courses demonstrate that students value the way these classes are taught, the engagement they experience, and the perceived relevance of the material.

These high-performing courses become our **primary candidates** for expansion. If we can enroll more students in courses that already generate strong satisfaction, we can boost overall student experience without needing to redesign underperforming classes from scratch.

Course Cost Efficiency Assessment

Next, we examine course cost efficiency, captured by **Average of CostPerCourse by Course**, varies by course.

Average of EvaluationScore by Course

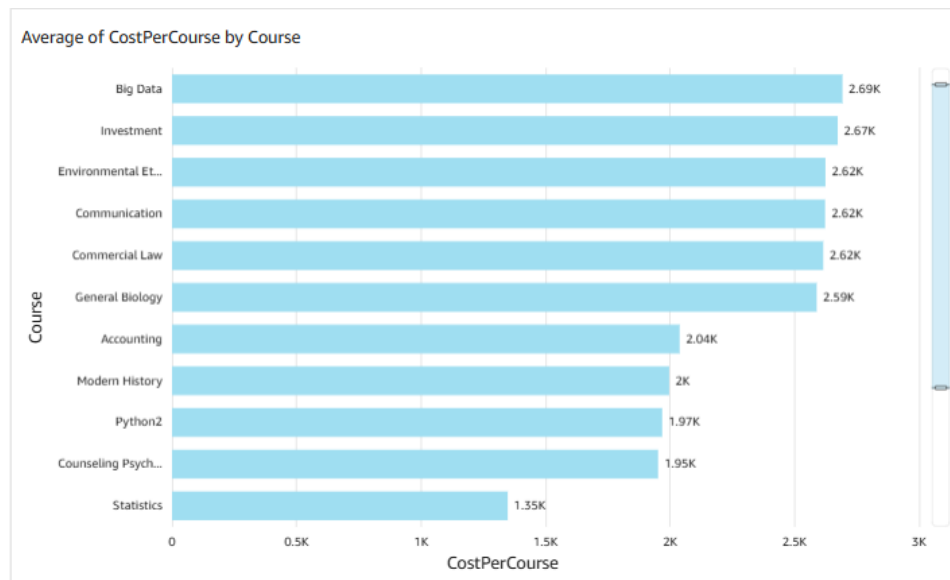Our cost per course analysis reveals significant variance in financial efficiency across our curriculum offerings.

From the graph we observe that:

- The most expensive courses include Big Data at $2,692.58, Investment at $2,673.38, and Environmental Ethics at $2,624.03 per course.

- In contrast, our most cost-efficient offerings are Financial Modeling at $1,269.13, US History at $1,319.86, and Urban Sociology at $1,322.42 per course.

- This cost differential of over $1,400 between our highest and lowest cost courses presents substantial optimization opportunities.

By identifying these cost patterns, we can strategically reallocate resources and implement targeted efficiency measures to reduce overall operational expenses while maintaining educational quality.

Can We Grow Without Paying More?

Improving satisfaction alone is not enough; we must do so **without increasing cost per course**. The next step is to compare evaluation scores with the **CostPerCourse** field.

Average of CostPerCourse by Course

Course	CostPerCourse
Big Data	2.69K
Investment	2.67K
Environmental Et...	2.62K
Communication	2.62K
Commercial Law	2.62K
General Biology	2.59K
Accounting	2.04K
Modern History	2K
Python2	1.97K
Counseling Psych...	1.95K
Statistics	1.35K

The **Average CostPerCourse by Course** visual shows how costs vary across the curriculum.

When we compare it with the evaluation scores, a key insight emerges:

- High-evaluation humanities courses generally operate at **similar or only slightly higher cost levels** compared to other courses.

- In several cases, these well-rated courses have **moderate costs per course**, meaning they deliver strong student satisfaction efficiently.

Because these humanities courses already provide a **favorable balance between cost and satisfaction**, they are strong candidates for growing class sizes. By enrolling more students per section (within pedagogically reasonable limits), the college can distribute costs across a larger group without materially increasing the cost per course itself.

Why Focus on Humanities Class Sizes?

Bringing the previous visuals together, we can formulate a compelling hypothesis:

1. **Enrollment & Demand:**

   o Humanities courses already attract a meaningful share of students across academic years, as seen in the **Student Majors by Year** visual.

   o This indicates ongoing demand that could support modest increases in class size.

2. **Student Satisfaction:**

- Humanities courses appear prominently among those with higher average **EvaluationScore**, as revealed by the **Average EvaluationScore by Course** visual.

- Students clearly value the experience in these courses, suggesting that the instructional design is working.

3. **Cost Efficiency:**

- The **Average CostPerCourse by Course** visual shows that these high-satisfaction humanities courses typically do not sit at the extreme high end of the cost distribution.

- This means the college can potentially serve more students through these courses without significantly changing the cost structure.

Together, these points support the thesis that **increasing class sizes in selected humanities courses is a feasible path to improving overall satisfaction while minimizing additional course costs**.

The key is to **target** only those courses that:

- Have **consistently high evaluation scores**, and

- Maintain **cost per course at or below the institutional average**, and

- Already show **sustained or growing demand** in enrollment.

Recommendations

Based on the analysis, the following actions are recommended:

1. **Identify Target Humanities Courses**

- Use the dashboard to filter the **Average EvaluationScore by Course** and **Average CostPerCourse by Course** visuals.

- Select humanities courses that meet these criteria:

   - EvaluationScore above the institutional average.

   - CostPerCourse at or near the median.

   - Stable or increasing enrollment over recent academic years.

2. **Pilot Increased Class Sizes**

- o   For the identified courses, pilot a **modest increase in class sizes** (for example, adding a small number of additional seats per section).

- o   Monitor evaluation scores and cost metrics over the next term to ensure that quality remains high.

3. **Preserve Instructional Quality**

- o   As class sizes grow, consider additional support mechanisms, such as teaching assistants, structured discussion sections, or peer-learning activities, to maintain engagement.

- o   Use feedback from both Youth and Adult Continuing Education students to fine-tune the approach.

4. **Track Outcomes via the Dashboard and Q&A**

- o   Use the **Student Enrollment Dashboard** and Q&A capabilities to conduct ongoing checks on:

  - ▪   EvaluationScore by course and professor.

  - ▪   CostPerCourse and cost per enrolled student.

  - ▪   Changes in student type distribution and major choices.

By following this structured approach, the college can make **data-informed decisions** about where to expand capacity, rather than relying on intuition alone.

Closing Statement

In summary, the data suggests that **carefully expanding class sizes in high-performing humanities courses** offers a promising path to **improve overall student satisfaction while keeping course costs under control**. By leveraging the insights in this dashboard and story—and by validating these findings through targeted pilots—Regional Community College can move closer to its mission of providing **affordable, high-quality education** to a diverse and growing student population.