CASES FROM THE FIELD

# Making the ROI Argument for SEM: It Makes More than Cents

*By Steven Smith, Tom Brophy, and Adam Daniels*

This article highlights the challenges, triumphs, and setbacks experienced by a mid-sized, public institution in Eastern Canada that is now more than two years into the SEM process. It shares how a team built a sense of urgency in an institution with historically-low retention rates and developed a variety of strategies and structures to improve these rates. The article offers the specific financial model and enrollment projections developed to support requests for funds and what they look like today. It explains these efforts in the context of COVID-19, and the consequences on the university and the plan. Importantly, the article shows how the use of institutional data and primary data collection for the effectiveness of programs was key to the university's success.

Even though most postsecondary institutions would agree that a strategic enrollment management (SEM) plan is needed (Black 2010), creating an effective one is complex, time consuming, and expensive. Moreover, creating a SEM plan requires the contributions of many people across an institution. People must break down their silos, come together, agree on an approach, develop a plan, and implement it. There are many roadblocks that will be encountered when developing a SEM plan, but perhaps one of the most challenging to overcome is obtaining (and maintaining) the funds needed to carry out the plan. This article outlines a university team's process to make the return on investment (ROI) argument for the needed funds to carry out a SEM plan, as well as how they developed that plan, assessed outcomes, and deployed strategies and tactics. In addition, the article shares how the process and the plan were impacted by the COVID-19 pandemic. Finally, the authors provide a brief overview of where they are now, and the next steps to enacting the SEM plan.

## The Saint Mary's University Context

Saint Mary's University (SMU) is a medium-sized, primarily undergraduate university on the east coast of Canada. Its approximately 7,000 students are in one of four faculties: arts (34%), science (24%), business (33%), or graduate studies (8%). Gender is almost equally split, with 49 percent men, 50 percent women, and 1 percent indicating a different gender. More than 70 percent of students come to SMU directly from high school, with the majority (56%) of students coming from within the province, and 28 percent coming from outside the country. Despite having a large proportion of students who are not local to the institution, only approximately 1,200 students live on campus at any one time, and many commute from a significant distance to attend. The campus is quite diverse, with students from many ethnic groups and more than 100 countries around the world. The university is ranked number four in Canada among primarily undergraduate universities (Macleans 2022).

In any given year, approximately 1,600–1,700 new students arrive at the university to begin their studies. This has varied over the last decade from a high of 1,800 to a low of 1,500. The Faculty of Science has tripled in size and Graduate Studies has more than doubled. After a long decline, the Faculty of Arts has been stable for the past five years, but the business faculty has decreased over the last ten years. Year one to year two retention rates for students at the university have, in general, been increasing (*see* Table 1), in part because of a series of efforts put in place to improve student retention. Incoming grades have also been increasing over the same period, though graduation rates have remained stable.

**TABLE 1** ➤ Retention Rate, Graduate Rate, and Average Entering Grade at Saint Mary's by Reporting Year

| Reporting Year | Retention Rate (%) | Graduation Rate (%) | Average Entering Grade (%) |
|---|---|---|---|
| 2022 | 83 | 54 | 87 |
| 2021 | 78 | 55 | 85 |
| 2020 | 79 | 52 | 84 |
| 2019 | 75 | 55 | 84 |
| 2018 | 78 | 53 | 82 |
| 2017 | 79 | 53 | 82 |
| 2016 | 77 | 52 | 83 |
| 2015 | 77 | 53 | 81 |

## The SEM Plan

Saint Mary's University has always had programs in place to support student success. However, these programs, though well-intentioned, were rarely known or understood outside of the units that were working on them. Further, it was rare that any evaluation of those programs took place, and they were certainly not linked to global, university-level retention data. In 2013, an incident occurred wherein a group of students was videotaped during orientation week singing what came to be known as the "rape chant" (*see* Smith, Brophy and Daniels 2021, for a review of the incident and its aftermath), which glorified sexual assault. This video was posted on social media and became an international news story. The university community was suitably horrified by what had occurred and acted to address the issue. Over the next several years, the orientation week events were completely revised (now called Welcome Weeks), and several student success initiatives were implemented. This culminated in 2019 when the AVP Academic and AVP Student Affairs and Services were asked to work together to create an all-encompassing SEM plan for the university.

Although the first draft of the plan was completed just prior to the beginning of the COVID-19 pandemic, the plan was not approved until September 2021. The SMU SEM plan ultimately involved active participation (*e.g.*, development of the plan, involvement on committees) of more than 120 individuals from across the institution. In developing the plan, the university followed the SEM approach outlined by Susan Gotthiel and Clayton Smith (2011; *see* Figure 1, on page 59). This model is a "birth to grave" approach, which focuses on students from the time they first hear of the institution through their post-graduation years as contributing alumni.

Consistent with the Gotthiel and Smith (2011) approach, the SMU SEM plan encompassed all aspects of student interaction with the institution. Although the plan was broad-ranging, some key initiatives included: a full review of recruitment strategy (graduate and undergraduate); purchase and implementation of recruitment and advising software; proposals to hire more advising and support staff; the development of a student success centre (and the hiring of eight staff members); program

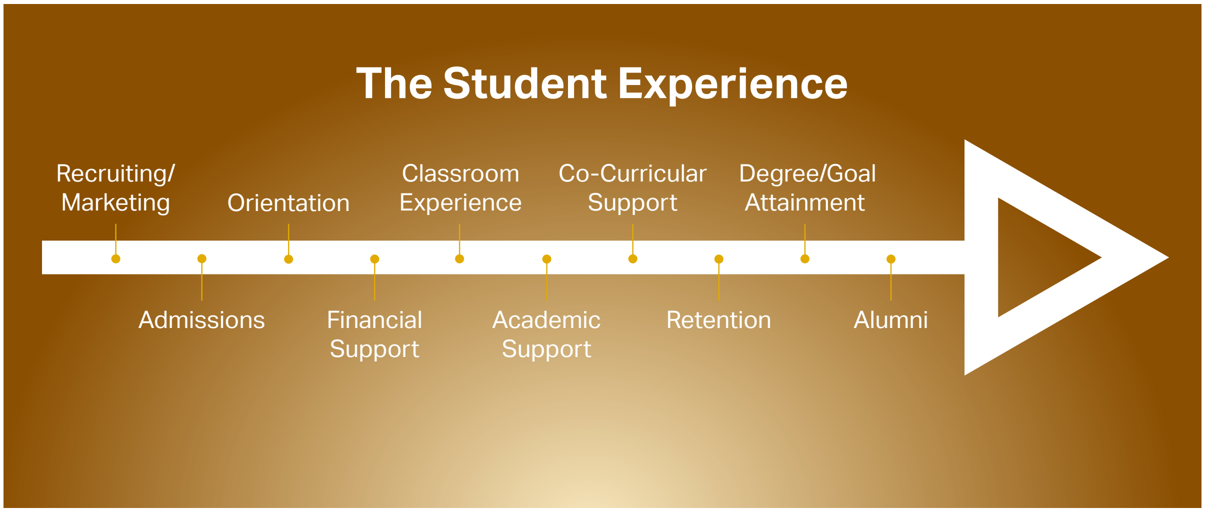


**FIGURE 1** ➤ The SEM Perspective

**Source:** Adapted from Gottheil and Smith 2011

renewal and innovation; specific committees to recruit and support diverse groups (specifically Black and Indigenous students); restructuring of language training for international students; a data and metrics committee to support data-informed decision making; and a student success committee with a series of working teams covering a broad range of student needs. Fundamentally, the plan was based around a community of care model (*see* Figure 2, on page 60) that provides supports for students in terms of academic experiences, academic skills, co-curricular experiences, and the student success center.

## Developing the Return on Investment Argument

When the SEM process began at the university, it started as a ground-up approach to student success. Faculty and staff understood that the university needed systems in place to support students. But as noted above, these systems were isolated, under-resourced, and generally not assessed for effectiveness. When the SEM plan process began, it was initiated from the Board level, but it was clear that there was little understanding of what the plan would entail. In fact, the (ultimate) leaders on the SEM plan were initially alerted to the desire for a plan by a vice president during an impromptu meeting where they were asked to have a sketch of the plan on her desk by the end of the following week—a very challenging timeline.

To some extent, this top-down approach was helpful to the development of the plan. It allowed the leads to bring together people from across the institution to begin developing the process. But for any initiatives derived from the SEM plan to be effective, there would need to be an investment from the institution. To secure the needed support from the board and budget committee, the university needed to create a plan that was comprehensive yet simple to understand, and which laid out the situation in simple and clear terms. The team had to build a sense of urgency to convince the administrators who controlled the budget (SMU has a centralized budget model) that such an investment was necessary. Further, given that the university budget committee has representatives from all units, the proposal needed to show how every unit could benefit.

There were four basic messages the team wanted to get across about why a well-funded SEM plan—that would improve student recruitment, retention, persistence, graduation, and success— was needed.

- It's good for the students: students who are successful have a greater sense of

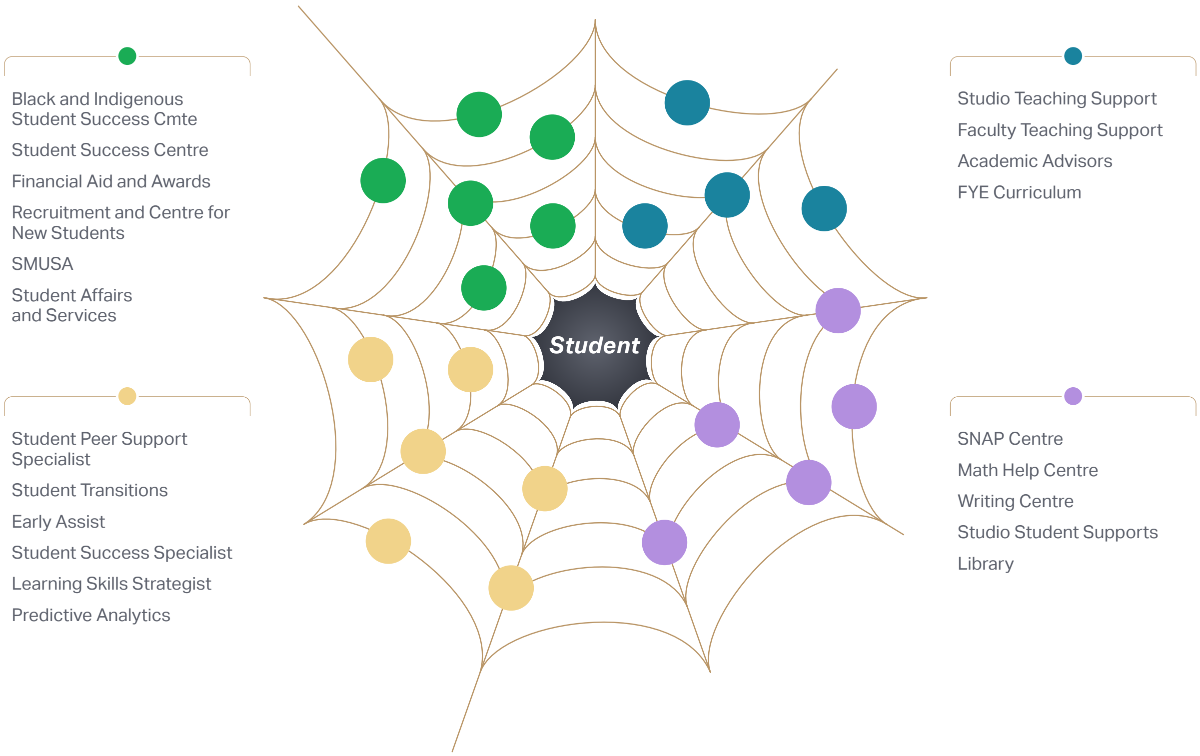


**FIGURE 2** ➤ Community of Care Model at Saint Mary's University

belonging, graduate, and earn higher incomes (Nietzel 2021; Statistics Canada 2021).

- It's good for society: a more educated population is better for our communities, families, and overall society (Parkins and Baldwin 2009).
- It's good for the university's reputation: Universities around the world are judged by their retention and graduation rates (*e.g.*, in *U.S. News & World Report* and Macleans)
- And finally: It's good for the university's financial bottom line.

The question about the university's bottom line, or the return on investment (ROI) for SEM, was the fundamental component of the team's proposal. It is easy for everyone to agree with numbers one through three above, but none of those necessarily lead to direct, tangible financial benefits for the institution. By focusing on the ROI argument, the team made concrete the potential benefit for the institution in investing in the components of the SEM plan. However, to make such an argument the team had to be very clear about the impact of the initiatives.

## The Importance of Assessing Impact

The core element of the approach was to pilot initiatives and to *assess* impact. Some arguments are easier to make—does an investment in international recruitment initiatives in one year correspond to increased enrollments the next? But that is a blunt and often misleading measure. Any recruitment officer will tell you that moving into a new market (or increasing yield from an existing market) takes time (*e.g.*, Waxman and Bishop 2022). This is even harder for retention efforts. How can universities assess the impact of a new student success or retention program? SMU's approach was to start at the beginning: First the team needed to lay out the data so that everyone was on the same page. This meant working with the internal Institutional Analysis department in order to understand what data was being given to senior administrators so that when the team explored proximal and distal indications of retention, everyone could agree to those benchmarks.

The second step was to lay out the cost of the proposed initiatives as part of the SEM plan. It was important to hit on the highest priority items first. Specifically, this meant:

- a significant boost to scholarship funding for new students, both to enhance recruitment efforts and to facilitate students continuing to their second year;
- hiring of staff for the Student Success Centre, a manager of SEM plan implementation, and new academic advisors;
- funds for professional development for staff, but also importantly for faculty who would be involved in the SEM process (specifically in the first-year seminar initiative and in the development of new programs); and
- funds to support new recruitment officer positions and to fund travel and marketing.

The third step was to lay out the benefits in terms of revenue for the institution. Working with the recruitment and marketing team, the SEM planning team set specific targets to increase new student recruitment (this was a general prediction in year one but would become more specific to each faculty and for both domestic and international students in subsequent years). The SEM team also set targets for increased year one to year two retention rates for each of the next four years. Importantly, the team worked closely with financial services to present a model that would be simple and easy to understand. Costs were provided for each category (staff, recruitment, programs, scholarships), and the expected increase in university revenue for each year was included, showing at what point (year 3, in SMU's case) projected revenues exceeded projected costs. The team was careful to ensure that the proposal never went over three pages of text and calculations.

In addition to the above, the team set clear key performance indicators (KPIs) for each unit—how many new students SMU expected to attract, and how many additional students the campus expected to retain. Many would argue (quite reasonably) that these are very blunt measures, with many factors that could potentially influence them (such as an unexpected pandemic), but these were the KPIs the executive leadership and Board were most focused on.

## Calculating ROI

To make the initial financial predictions required for the model, the team worked with financial services to understand how they created their estimates. It is important to note that at the time (this is no longer the case), the budget model was predicated on the average tuition revenue "per student." In other words, the model used calculated a value for a "typical" student, even though each Faculty had different tuition rates and student fees, different proportions of domestic and international students (who pay higher tuition), and different numbers of courses taken (tuition is charged per course). At SMU, in 2019, this value was $11,500. As can be seen in Table 2 (on page 62), with 1,600 new students coming to SMU per year, a 1 percent increase in retention in year one leads to total ROI of $489,752 by year four. This includes a calculation to account for retention rates in subsequent years. Similarly, a 1 percent increase in enrollment meant a four-year ROI of $635,112.

## Assessing ROI

The key to the approach presented was a commitment to continuing to assess impact, and thus, continuing to assess the ROI. The SEM team knew that their approaches represented best practice in terms of student success and recruitment efforts. Part of what allowed the team to convince senior management about funding the initiatives being proposed was that there was an explicit link between the proposed enrollment enhanced activities and monetary value being assigned to the initiatives and outcomes. A core commitment was to continually assess the programs being put in place to ensure their effectiveness. Although an explanation of what specific assessments were put in place for each program is beyond the scope of this article, the point was that this forced all units making proposals for funding to be accountable for their predictions and action. For each program, the team

**TABLE 2** ➤ Sample Financial Return on Investment for Increased Retention and Enrollment

| | ROI for Increase in Y1-Y2 Retention | ROI for Increase in New Enrollment |
|---|---|---|
| **New Students Per Year** (Typical) | 1,600 | 1,600 |
| **Increase in Retention** (%, n) | 1%, 16 | 1%, 16 |
| **Calculation** | ( 16 x $11,500 ) +<br>( 16 x 0.87 x $11,500 ) +<br>( 16 x 0.91 x 0.87 x $11,500 ) | ( 16 x $11,500 ) +<br>( 16 x $11,500 x 0.79 ) +<br>( 16 x 0.79 x 0.87 x $11,500 ) +<br>( 16 x 0.91 x 0.87 x $11,500 ) |
| **ROI by Year 4** ($) | **489,752** | **635,112** |

set clear targets and goals (indeed, this was a fundamental tenet of the SEM plan) which in turn made expectations clear for programs and the staff. Further, part of the approach was to launch initiatives with strategic funding (for up to three years) and then, if successful, shift to operational funding mechanisms for those programs.

## The Impact of COVID-19

Having used the ROI proposal to get the funding for programs, SMU entered the 2019–2020 recruitment season and launched its retention programs with tremendous optimism. But then the COVID-19 pandemic struck and changed plans. The pandemic had an immediate impact on year one to year two undergraduate retention rates. Initially, there was surprisingly good news, with retention rates jumping from 79 percent to 83 percent. The university initially thought this was due to its retention efforts but also realized this was probably due, in at least some part, to grade inflation that occurred for students. Not only did many faculty members become more lenient in their grading toward the end of the winter term, but the university instituted a pass/no credit grading system that allowed many students to drop their lowest grades from the calculation. The most recent data suggests that the retention levels have now (as of 2022) returned to their baseline of 79 percent. Interestingly, as noted in Table 3 (on page 63), this varied across the undergraduate faculties, with the largest drop occurring in the Arts Faculty. This could be attributed to a number of reasons, but the Arts Faculty has the fewest SEM-endorsed student retention initiatives. Both Science and Business has engaged in systematic, broad-ranging efforts to promote student success and persistence, whereas the efforts in Arts have been more limited.

Interestingly, there was an unexpected impact of student grade inflation and retention on the cost of initiatives. One of the most expensive initiatives was increasing the value of scholarships. With the increase in retention and the increase in grades, SMU saw a much higher renewal rate than in previous years (and much higher than predicted in the cost structure), which made the SEM initiatives, overall, more expensive, even when considering the fact that the campus did not hire all the staff member that were proposed.

In addition to the shift in retention, due primarily to SMU's high percentage of international students, there was a significant impact of COVID-19 on new registrations (and returning students, particularly in 3rd and 4th year). As with many countries, Canada imposed significant border restrictions during this time. Although ultimately these restrictions were eased, it led to substantial uncertainty for potential international students, and their numbers dropped significantly. As can be seen in Table 4 (on page 63), compared to 2018, the 2022 enrollments of international students were down. Even though there were increases in domestic student enrollments, the increase in domestic numbers was not sufficient to offset the revenue losses from the drop in international students.

In addition, SMU found that students were taking fewer courses per semester in 2020–2021 and 2021–

**TABLE 3** ➤ First to Second Year Retention Rates, by Faculty

| Faculty | Fall 2021 (%) | Fall 2022 (%) |
|---|---|---|
| Faculty of Arts | 79 | 73 |
| Faculty of Science | 86 | 83 |
| Sobey School of Business | 86 | 83 |
| **Total** | **83** | **79** |

**TABLE 4** ➤ New International Student Enrollment, by Faculty

| Faculty | 2018 (%) | 2022 (%) |
|---|---|---|
| Faculty of Arts | 18 | 10 |
| Faculty of Science | 29 | 25 |
| Sobey School of Business | 42 | 26 |

2022 than in previous years, further eroding tuition revenue. It is difficult to be sure why this occurred, but hybrid learning often made it more difficult for students to find the courses they needed, and students reported working more hours during the pandemic than prior to its onset. Overall, this resulted in a significant drop in per-student revenue from 2019 to 2021. As noted above, the calculations that were made to determine ROI assumed each student's revenue calculation was $11,500. Post-pandemic, this dropped to $9,500. When combined with the increased scholarship expenses, the ROI argument was significantly weakened.

## Lessons Learned and Future Directions

Through the process of making the ROI argument, and in the follow-up to the onset of the COVID-19 pandemic, SMU has learned some important lessons about how to make the argument for support for SEM initiatives. First, the ROI argument was effective to get the initial support needed to launch initiatives and programs. Unfortunately, due to the ongoing financial limitations imposed by the changes in the tuition revenue, the university has had to reconsider some approaches moving forward. The SEM team also needs to shift how it talks about initiatives, and the impact of those initiatives, with faculty, staff, and senior administration.

In retrospect, a clear shortcoming in the approach was that the SEM team could have more effectively highlighted how long it might take for the initiatives being developed to bear fruit. It became clear during the onset of COVID-19 that senior administration expected immediate results. When those results were not forthcoming (for the reasons outlined above), support for the initiatives waned. Currently, the university has halted funding for most SEM initiatives, and slowed or stopped the hiring process for several key student support and recruitment positions. The team is hopeful that as we move out of the pandemic, its ability to recruit and retain our students, using best practice and empirically-validated methods, will receive renewed support.

Looking toward the future of SEM at SMU, the team must remember the "T" in "SWOT analysis." Every university faces threats to their enrollment and retention efforts. SMU has significant declining birthrates of eligible Grade 12 Nova Scotia students who are the main recruitment cohort (many institutions are facing this). The campus is trying to understand how to manage the continuing fallout from COVID-19 and what this means for overall enrollment patterns. The university is facing both a notable increase to international student tuition fees as well as a decreasing interest in international students traveling for education (particularly from China). Compounding this is the "great resignation" being seen across the education sector as people change jobs or retire (Massa and Conley 2022). Within organizations, staff turnover has resulted in a loss of organizational memory and skill sets. Finally, despite best intentions, SMU has not been able to meaningfully create innovative and attractive academic programs to drive enrollment growth.

Moving forward, SMU is launching or continuing several initiatives that it found, through careful empirical data collection and analysis (and often carefully controlled experiments; *see e.g.*, Smith, *et al.* 2022; Tabvuma, *et al.* 2021; 2023) to be effective at increasing student success. One of the most promising programs is a first-year seminar program that has been ongoing since 2018. This was developed by one of the SEM committees and has been tested in all three undergraduate Faculties to great success. The most tested program has been in the business school, where the program has been shown to increase midterm and final grades, as well as retention of students from year one to year two (Tabvuma 2023).

In addition, the SEM team has been allowed to move forward with hiring some student success staff. Specifically, it has been working to staff the new Student Success Centre, hiring a manager, a learning skills strategist, and a student success specialist. These staff members will work closely with an existing student transitions specialist. This is not the full number of staff members initially approved but should allow the campus to begin some initiatives. Further commitments include hiring a senior academic advisor in each undergraduate Faculty to help support student success as well as rolling out software to support advisors as they track student progress through their programs.

SMU has also developed a federal grant-funded program of research (*e.g.*, Smith, *et al.* 2021, Gaeckle and Smith 2022), which has worked with multiple universities to develop a mobile app to support student success. Specifically, the app assesses student personality, habits, and demographics, and—via a machine learning algorithm—uses that information to match students with action plans that support their success as they transition into, through, and out of university. The app is currently in trials and has showed some important initial successes.

Perhaps most importantly, SMU has begun initiatives to further evaluate and justify its SEM approach. Many readers will look at how the university made its calculations (*i.e.*, assigning a monetary value to a student) and consider this a simplistic approach and one that does not confirm with their own institutional guidelines or expectation; this is fair. SMU worked with the system that was in place on their campus at the time. The SEM leadership team is working closely with Institutional Analysis and Financial Services to develop a much more detailed enrollment projections model. This will ensure that all departments within the university are looking at the same data when analyzing changes in student success and recruitment.

SMU is also working with all SEM committees to develop an annual assessment cycle to create key outcome reports. This allow the campus to hold committees accountable in terms of the work they are doing, as well as demonstrate to senior administration that initiatives being undertaken are effective. Further, the university has recognized that although it is a diverse community, it is not necessarily providing a sufficient level of supports to those diverse students. Part of the challenge is being aware of who the students are. To understand needs, SMU needs to understand the characteristics of its students. Therefore, the campus is using its student information system to collect data on several equity, diversity, inclusion, and accessibility factors (*e.g.*, age, gender, Indigenous, racial identifiers, financial need, first generation status, 2SLGBTQ+ identification, etc.) in order to ensure that the proper programs are in place to support students' diverse needs.

## Conclusion

The ROI argument was a critical element to the initial success at rapidly launching the SEM plan at Saint Mary's University. These calculations ensured the student success initiatives were supported with a financial foundation that could garner support across the institution. An unforeseen element, majorly impacted by the COVID-19 pandemic, was that the values in this calculation would be shifted so dramatically due to changes in the enrollment makeup. This led to a shift in the average tuition revenue per student from $11,500 to $9,500 in a short period of time. This threat required SEM leaders to consider, and articulate, that increases to retention and enrollment still meet the original goals for the SEM plan, even if the timeline shifted. This experience resulted in important lessons learned, namely the critical need for communicating realistic expectations to senior leadership about the length of time required to see initial payback for the enrollment enhancement activities proposed. Although the initial estimated financial benefits have not been realized, the ROI argument is still an important one. Knowing the revenue increases that can occur because of increased enrollment (through enhanced recruitment and retention) is a valuable tool in the argument for SEM activities.

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