Only Data Can Lead the Way

By Kathy Kurz and Jim Scannell

Under the enrollment management umbrella, data is the glue that holds the process together.

Enrollment management is a process, one that brings together often disparate functions having to do with recruiting, funding, tracking, retaining, and replacing students as they move toward, within, and away from our institutions. Just as staff must be organized to support a synergistic effort, so must data. Databases that integrate admissions, financial aid, registrar, and student life information can provide the capacity for coordinated research and planning in support of enrollment management efforts.

There are a number of critical activities that logically fall under the enrollment management umbrella, but at the end of the day each is driven by data. Often misunderstood by administrative units as adding new tasks to the "in box", using data to inform enrollment management efforts is rather a way to more efficiently and effectively conduct business. For example:

• Admissions marketing programs that use data to drive efforts can attract more interest for fewer dollars. Pricing and financial aid strategies that are based on empirical evidence can optimize an institution's ability to attract and retain the desired academic quality, program of student, racial, ethnic, and socio-economic mix of students.

• Analysis of trends in academic majors can provide an opportunity for institutions to anticipate immediate and long-term student interest as well as methods of improving the institution's ability to provide for those interests.

• Re-enrollment information can identify student characteristics related to attrition, thus enabling the institution to develop strategic interventions.

• Outcomes information provides students and parents with the understanding of the return on their education investment.

• And, finally, collecting and utilizing data on alumni can allow institutions to both stay in contact as well as harness this incredible potential resource for recruiting, networking, and fundraising.

Clearly, at every turn, data are at the core. Analysis is the strategic hub that enables institutions to manage their enrollments not only to ensure the right number of students given an institution's capacity,

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but also the most appropriate students given institutional mission, and the necessary net revenue to meet budgetary targets.

Barbara Fritze, vice president for Enrollment and Educational Services at **Gettysburg College** (Pa.), talks about data as the glue that holds enrollment management together.

"Data is the foundation of the enrollment management program at most colleges and universities and Gettysburg is no exception," she says. "Whether it is collecting and reviewing admission marketing efforts (such as web trend reports, admission funnel information by various market segments, valuations of specific marketing strategies) or using our financial aid net revenue model to meet established enrollment benchmarks, our staff (and ultimately the College) continue to benefit from our data-driven approach to decision making."

The traditional use of data outlined above has grown into more sophisticated use of data by the Gettysburg enrollment management committee.

Gettysburg College employs four models in a comprehensive enrollment planning cycle:

- Financial Aid/Net Revenue Model
- Enrollment growth/Trade-off model
- Five-Year Planning Model
- Summer Melt Projection Model

"We can't even imagine not having this critical foundation to our enrollment program not available to us for planning and decision making," Fritze says.

FIRST STEP OF THE JOURNEY

Planning is the first step in the enrollment management journey. The graphic below on this page ("Strategic Planning Model") depicts a planning process which begins with a data-driven understanding of the external and internal forces which shape an institution's challenges and opportunities. For example, government policies, the economy, technology, and demographic trends need to be understood in light of available institutional resources, traditions, strengths, and weaknesses.

Many enrollment managers, particularly those at state-supported institutions have to anticipate an often uncertain and politically charged public policy arena which can have a profound impact on goals, constraints, and resources. Bill Young, associate vice president and director of Enrollment Management at **Colorado School of Mines**, reflects that over his 20 plus years of enrollment leadership continual change has been the constant.

"Colorado higher education has been under severe financial pressure," Young says. "At the same time, Colorado School of Mines has a strategic plan that includes enrollment growth. With all that, it's been critical that data-driven analysis and decision making guide us. Otherwise we'd just be guessing about the future."
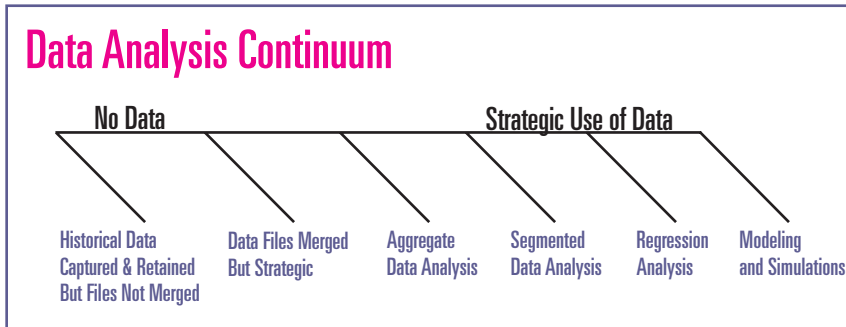
HOW DATA DRIVEN ARE YOU?

Institutions of higher education, large and small, public and private, research university or liberal arts college, tier 1 or tier 4, find themselves today in varying degrees of readiness to use data to drive

Strategic Planning Model

Environment
- Trends
- Customers
- Competition
- Government
- Economy
- Technology
- Demography

Forecast
- With assumptions

Goals
- Desired Outcomes
- Ranking

Problems & Constraints

Current Position
- Resources
- Problems
- Weaknesses
- Traditions
- Strengths
- Image

Program Planning
- Outcomes of Alternate Programs
- Cost of all Programs
- Timing
- What to do
- When
- How
- Assignment of Responsibility
- Project Definition

Organization & Numbers
- People
- Number
- Qualification
- Organization
- Information

Facilities & Funding
- Space
- Equipment
- Timing
- Budget
- Cost Effectiveness
- Level
- Income
- Expense
- Financial Control

Planning

Implementation

Evaluation

Source: Frank B. Campanella, Professor of Finance, Boston College

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decision-making. The graphic at right portrays a data analysis continuum from the far left where no data exists—because no data are captured and retained and files aren't merged—to the far right where the strategic use of data in segmented analysis, regression analysis, and modeling and simulations provide tools to explore options, understand tradeoffs, and ask "what if" questions. (Gettysburg, we already know, is at the far right!)

Data gathering is an unforgiving exercise. There is only one way to do it. Any compromise in the quality, completeness, or validity of the data will guarantee erroneous and potentially misleading information. At its best, "bad data" will not support the institution's efforts to move towards the stated goals. At its worst, "bad data" will seed the road to managing enrollments with land mines. Demand analysis is a case in point. Understanding applicant demand shouldn't begin at the applicant stage but rather at the inquiry stage. In order to understand inquiry behavior, an institution needs to capture one record per inquirer for a specific term. However, at some institutions not all inquiries are entered into the database. At others the inquiry database doesn't "bridge" to the applicant database. In both cases these institutions are prevented from de-

Data Analysis Continuum

No Data   Strategic Use of Data

| Historical Data Captured & Retained But Files Not Merged | Data Files Merged But Strategic | Aggregate Data Analysis | Segmented Data Analysis | Regression Analysis | Modeling and Simulations |

"The University of Maine System needed to help the seven university campuses better understand their use of financial aid for strategic purposes connected to building enrollments. By utilizing admissions, enrollment and financial data from the entire U Maine system and the resulting analysis, campus-specific predictive enrollment and retention models were built," says Nunez. "In addition, this analysis provided guidance to the system as to how to best utilize financial aid and also advocate for increases in financial aid at the state level. Without the data, these arguments could not be made convincingly."

Wayne Locust is the senior associate vice chancellor for Enrollment Management and University Life for the **State University of New York** (SUNY) system. Locust says legislators, campus officials,

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>
> *–Wayne Locust, State University of New York system*

veloping a complete understanding of applicant demand trends. Only through a longitudinal analysis of the behavior of inquiries (e.g., number and conversion rate to application—based on first source, timing, number of contacts, home address, etc.), can an institution strategically allocate its recruitment resources. Not all inquiries are equal. Self-initiated inquirers, for example, typically have conversion rates five to ten times greater than respondents to direct mail. Therefore, not all follow-up should be equal.

IT'S NOT JUST INSTITUTIONS

State systems have to use data to understand how their policies and resource allocations are contributing to enrollment goals. Those goals are often driven by the state's economy and its need for an educated citizenry.

Scannell & Kurz recently completed a research project for the **University of Maine system** where a number of public policy questions critical to the state's future were answered (e.g., Who is being served? Who is not served? How is need met?). Elsa Nunez, vice chancellor for Academic and Student Affairs for the University of Maine system, says that information paid off.

and prospective students and their families are all interested and concerned about the availability of educational opportunity in New York State. Locust sees the system's enrollment management function as both an enabling vehicle for campuses and a strategic champion for the State to meet its enrollment goals.

"Managing and monitoring the application and enrollment activities of the State University of New York's 64 campuses is no small challenge," Locust notes. "Having the ability to predict, track, and measure student interest and behavior is critical to our need to effectively market the SUNY system to targeted populations such as high achieving students, out-of-state students, and under-represented students; all very important goals and desires of our very diverse and varied campuses."

SUNY's research and analysis division is charged with integrating external demographic indicators and industry sources with applicant and enrollment data to help drive marketing and planning decisions, he says.

IT REALLY IS ALL ABOUT DEMAND

While, as noted earlier, demand analysis helps institutions manage

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their future, enrollment demand dictates (or should dictate) pricing and financial aid strategies. The diagram at right, taken from **University of Virginia** economist David Brenneman's 1994 book *Liberal Arts Colleges: Thriving, Surviving, or Endangered?*, spells out the influence of demand on net tuition revenue.

The higher the demand, the less draw on unfunded student aid. Likewise, the lower the demand the greater the draw on institutional aid resources. Thus the greatest force for controlling aid expenditures is an institution's demand curve.

At a minimum, every institution needs to understand which students by need and quality are generating what levels of net tuition revenue.

To that end, every institution should create a net tuition revenue table based on student quality segments (low to high) and need segments (zero and low to high) on an annual basis. As expected, as family contribution goes up, net revenue goes up. As quality increases, however, net revenue typically goes down.

Clearly, if an institution is having difficulty meeting its net tuition revenue targets, these data will demonstrate where financial dollars are being spent and where adjustments in new student enrollment would need to be made to increase net revenues, again contingent upon appropriate levels of demand.

To understand demand, therefore, it is also important to analyze admits and yields by need, quality, amount of grant aid, as well as the other student characteristics that can influence enrollment behavior.

Such analysis (also known as price sensitivity analysis) requires the merging of admissions and financial aid files into one record per applicant for a specific term. Only then can the institution truly understand the influence of grant on the probability of enrollment given certain student characteristics: academic quality, program area of interest, need, race, ethnicity, residency, and so on.

Tom McWhertor is the vice president for Enrollment and External Relations at **Calvin College**. He talks about how a new merit program was started based on just this type of analysis.

"We recently changed our scholarship program to include a new 'top' scholarship, because the data demonstrated that the highest achieving 'presidential' recipients were not yielding as well as we thought they should, or even as well as those who were just one notch lower in their academic/involvement profile," McWhertor says. "The result in yield is yet unsure for this year, but the new 'Trustee' award has attracted nearly 25 percent more applicants in those top two categories combined, and we are confident it will improve our yield on these excellent candidates as well."

ENROLLMENT DEMAND AND NET TUITION REVENUE
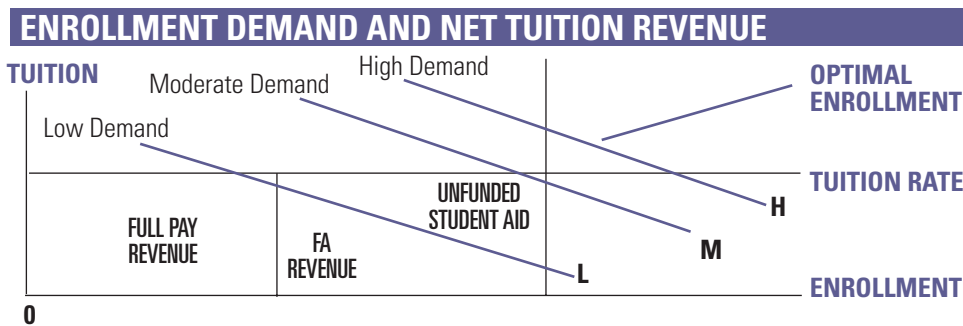
BUT ENROLLMENT MANAGERS CAN'T FOCUS ON NEW STUDENTS ALONE

Enrollment managers need data to understand not only who initially enrolls and why but also to understand re-enrollment patterns. Once again a data file, this time on enrolled students, is required. This file would supplement the admissions and financial aid data noted earlier. Fields for the retention analysis would include, for example, declared major, earned GPA for a specific term and cumulative GPA earned, earned hours for a specific term, attempted hours for a specific term, cumulative earned hours, and housing status to name but a few. Using this full complement of student characteristics, the institution can then examine cohort retention rates by subpopulation and develop predictive retention models. The former allows an institution to understand which subpopulations are more at risk of leaving. The latter enables the institution to measure the influence of various factors (e.g., financial need, SAT score, program area, gender, earned GPA, distance from home, housing status, etc.) on probability of re-enrollment.

Both approaches would help the institution develop effective and efficient intervention strategies for improving the retention of students through graduation. For example, if in conducting the retention research it became known that certain levels of unmet need contributed to attrition, then the institution could examine its renewal policies for continuing students and focus additional institutional resources on those above the unmet need "threshold."

CONCLUSION

Enrollment management initiatives are often driven more by anecdote than by data. In the absence of data, recruiters find it difficult to "work smart," senior officers will worry whether additional increases in institutional aid are a good investment, and groups charged with improving retention will revert to approaches that can best be described as "feel good" initiatives which seldomly add value or make a difference. To end as we began, only data can lead the way. **U**

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