

– CHAPTER SIX –



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Using a High-Tech, High-Touch Solution to Retain Vulnerable Students

Using a High-Tech, High-Touch Solution to Retain Vulnerable Students

Dr. Doug Hastad: President, Carroll University

Retaining current students and enrolling first-time students are equally important to the business model of higher education. Successful retention rates pay tangible dividends. There are many reasons for this. First, we know that students who persist are much more likely to earn an undergraduate degree than students who transfer to another institution. Second, institutions with a credible retention rate (percentage of first-year students who become sophomores) are much more highly regarded by families shopping for the “right” campus. Third, students who leave do so because their expectations were not met. Regardless of the validity of their claim, their potentially disgruntled commentary is not good for business. Fourth, retaining current students allows the freedom and flexibility to target new prospects more effectively and selectively. Fifth, it costs less to retain current students than it does to identify, recruit, and enroll new students. Finally, retained students carry as much financial value to the bottom line as do newly minted freshmen. Although the art and science of recruiting first-year students is well-known and continually refined, there has been little change in the techniques and practices available to retain students.

Our challenge was to develop and implement an initiative that would immediately boost and sustain the long-term retention rates of our traditional undergraduate students.

At a time when families are questioning their ability to afford higher education, it is imperative to leave no stone unturned in the practice of attending to currently enrolled students. After an extensive review of our past retention rates and a thorough study as to the reasons why students chose to leave campus, we decided to direct talent and resources toward a high-tech and high-touch initiative that had a singular focus—namely, improving the persistence rates of undergraduate students.

Founded in 1846, Carroll University is the oldest four-year campus in the state of Wisconsin. It is a private comprehensive institution with a current enrollment of about 2,500 traditional full-time undergraduate students. The curriculum is grounded in the liberal arts but offers a variety of undergraduate professional programs. The current retention rate for first-year full-time undergraduate students is 75 percent. Although respectable by comparison, these levels fall short of benchmarks represented by best-in-class peers. Our challenge was to develop and implement an initiative that would immediately boost and sustain the long-term retention rates of our traditional undergraduate students.

Project Goals

1. Develop and refine the role and responsibilities of a newly created position—the director for student success.
2. Provide a seamless integration of the retention initiative into the existing enrollment management infrastructure and the campus culture.
3. Work with a technology partner to identify critical variables and develop a software product compatible with existing campus technology infrastructure that alerts the campus to students at risk for leaving school. The technology partner will:
 - Design a versatile software product that maximizes its applicability to Carroll and can be tailored for use by a wide variety of client institutions.
 - Contribute technology and support to Carroll's Center for Student Success and create a customized tool set to identify students at risk for leaving.
4. Develop educational materials, intervention strategies, instructional protocols, and a training site for institutions interested in implementing the retention program on their campus.

Hiring the Director for Student Success

Reporting to the vice president for enrollment management, the director of student success is responsible for identifying students who are at risk of leaving the university and intervening in these circumstances to successfully resolve the student's issue(s). Additionally, the director of student success is expected to assess the overall campus environment as it relates to retention issues and responses to at-risk students; assist in the development of standard guidelines for academic advising, including the implementation of an early alert system; work with the Office of Student Affairs to develop programs designed to retain students; intervene with students who have financial aid and/or business office payment problems; perform exit interviews for all students who decide to leave Carroll; and manage and coordinate the Center for Retention.

The director for student success began his duties on July 1, 2008. Office space was strategically located within the Admissions office/financial aid area. Shortly thereafter, a team of staff members began their work with our industry partner to identify risk factors, develop mathematical models to isolate predictors of dropping out, create the mechanics of analyzing and reporting the data in a meaningful and understandable way, and finalize the prototype for piloting the predictive model. During this same timeframe, the director for student success began developing processes for engaging the campus in this initiative and follow-up strategies for students identified at risk.

Integrating High-Tech and High-Touch into the Campus Community

From the outset, it was readily apparent that retaining students was not a widely embraced priority on campus. Many believed that retaining students was "not my job." Some simply did not want to get involved. Others thought it was an unseemly revenue-driven enterprise. A few placed the burden of responsibility squarely on the backs of the students. We are pleased to report that this initial reluctance to get involved is becoming the rare exception. The vast majority of the campus community recognizes the value of retention, and most faculty and staff readily pitch in to do their part. Most, if not all, of this change in attitude can be attributed to the decision to assign the responsibility of retention to a single office. We believe that one person responsible for a coordinated retention effort is the best approach to heighten campus awareness as to the importance of improved retention and successfully engage the entire campus in this process. Happily, this is proving to be true.

The director of student success continues to be aggressive, highly visible, and a champion for retention. Some examples of activities used to engage campus constituents included the following: 1) making personal contacts with all first-year students; 2) conducting regular meetings with a wide variety of faculty/staff committees; 3) meeting face-to-face with academic advisors and academic departments; and 4) engaging with student affairs personnel.

During the Fall semester, the director introduced colleagues to the role of the office and secured support for the Student Success initiative. Additionally, these meetings afforded the director time to identify and discuss policies and procedures that did not appear to align well with retaining and graduating students. A few of the seemingly misaligned practices included registration holds because of outstanding bills; dining service concerns; the athletic team “cut” policy; certain academic course/program issues; and not having a place to transfer internally after being denied admission to their academic program of choice. At every meeting, the director shared a copy of the faculty/staff electronic alert report and encouraged individuals to use it as a way to inform his office about students demonstrating at-risk behavior(s). This electronic form is simple and easy to complete. It is sent to all faculty and staff on a regular basis during the course of the semester. The survey asks to report on students who are experiencing any of these issues: poor academic performance; poor attendance (in class, campus employment); difficulty in financing their education; struggling to fit in the campus community; and personal issues that are causing challenges. A space is available to offer written detailed comments about the student in question. Once completed, this form is sent directly to the director for student success.

Constructing the Alert System

After careful analyses, key data elements were identified to predict, with a good deal of accuracy, students who were at risk to leave Carroll. The mathematical algorithm used to predict at-risk students was developed over time and customized to the factors that historically were associated with students leaving Carroll. These predictive elements conveniently reside in the student engagement database that operates efficiently and harmoniously within the university’s student information system. Thus, it does not require any additional hardware or system management resources.

Our industry partner designed the software to be adaptable and tailored to virtually all institutional types and student populations. The relevant variables and their relative weightings would be unique to each institution’s student mix. For instance, institutions with large adult and/or commuter populations might find it important to define and capture information for data elements related to the number of hours students work off-campus, the distance they live off-campus, and their number of dependents.

Our report-writing tools enabled us to produce a series of customizable reports that were used to identify at-risk students based on any combination of factors contained in the student engagement database. Our industry partner is familiar with our institution, verified the appropriateness of this database for our campus, and worked side-by-side with us to ensure smooth and effective access to and analyses of the data.

Examples of the data elements include, but are not limited to, the following: missed class, poor grades, difficulty with a roommate, and other factors shown in our analyses to predict a student's choice to leave school. In an attempt to increase the number of predictive factors in the database, we surveyed 634 first-year students (Fall 2008). The director of student success personally administered this test to each of the first-year seminar (FYS) classes. In addition, we sent a questionnaire to the parents of first-year students inquiring about their level of satisfaction with their son or daughter's experience at Carroll. Results of this survey provided additional information and guidance for the director of student success in identification of students who were most likely to consider leaving.

The actual identification of at-risk students was based on a mathematic model derived from historical retention data at Carroll that initially included more than 50 different factors. The model was then applied to current students to predict whether they will leave Carroll. The model was built iteratively, looking at factors that influence retention. A regression tool in SPSS was used to determine which factors were actually significant and what weight should be assigned to each factor. Because we were predicting a categorical event (stay or leave) instead of a numerical value, logistic regression was used. This iterative process is one that other institutions could use to determine the best model for their student populations or subsets thereof.

Applying the Model

The model gives us the probability of a current student leaving Carroll by fitting the individual's data to a logistic curve built from the historical data. Some of this data is static, such as entering academic ability. Some of the data is dynamic, such as number of unfavorable grades. By continually refreshing data about an individual, we are not only predicting the likelihood that he or she will leave, we are able to note unfavorable changes in the probability that he or she will leave.

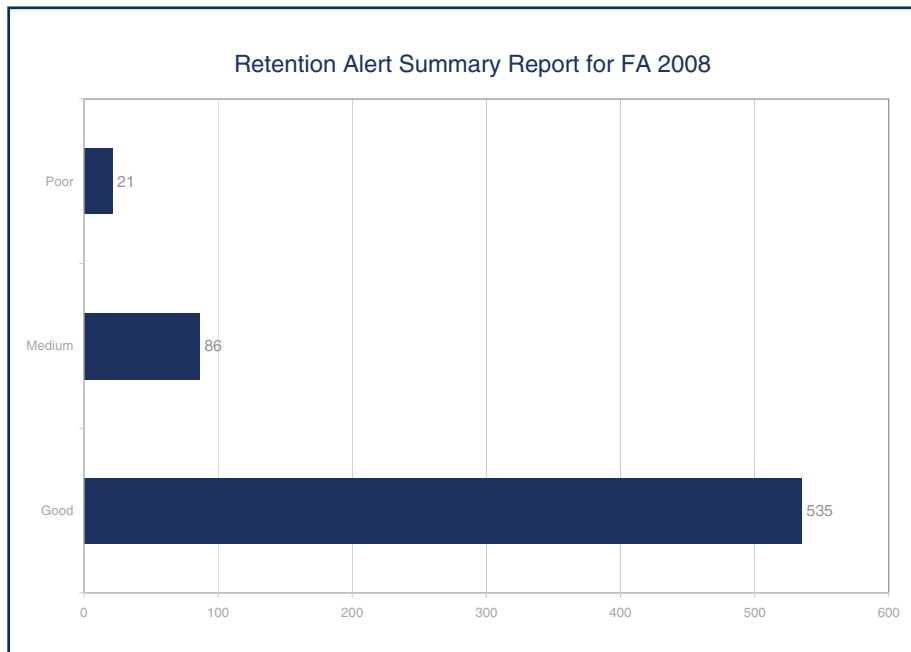
The model runs nightly on every student in the cohort and calculates a score that is then converted into a category. Table One shows an individualized report for a student identified as at risk of leaving. Information on the report provides the director for student success a starting point to begin the intervention process.

Table One

Student ID Number	Retention Variable Description	Retention Variable Value	Retention Variable Score
	Work study earning for the student during the year	1.0644	0.0489624
	Academic points	20	0.48
	Count of sub-standard midterm grades	1	0.214
	Does the student live in campus housing	1	-0.618
	The retention history for a particular major	85.6	4.0232
	The number of times the student changed majors	1	0.89
	A calculation of a family's out-of-pocket expense	7.8794	0.11976688
Summary			5.15792928

The software is also able to provide an alert summary for the total population of students that resides in the database (see Table Two).

Table Two



Intervening with At-Risk Students

It is the responsibility of the director for student success to review the data, identify at-risk students, and follow up with an appropriate intervention strategy. During the 2008 Fall semester, the director received more than 525 alerts. After a careful review of the predictive factors contributing to the alert (such as poor academic performance, poor attendance, not fitting in, personal issues, and financial issues), the director developed an intervention strategy. Sometimes the director was able to initiate the personal contact with the student. Other times, it was determined that the contact should come from someone close to the student (such as an instructor, hall director, coach, roommate, or advisor). Initial contacts were made via phone, email, text message, or a simple face-to-face visit. The director monitored each of the interventions and determined who might need to get involved and/or continued to work on unresolved alerts submitted by faculty/staff. His goal was to bring closure to any and all interventions. Carroll is a relatively small institution, making this kind of individualized approach feasible. At larger institutions, the data could also be used to triage students at risk into categories and target interventions accordingly.

Tallying the Results

As we are underway with the Spring semester, I am pleased to report the following:

- During the Fall 2008 semester, the director of student success initiated 413 interventions. Seventy-one interventions were resolved. Of the 71 interventions, 18 students withdrew and 53 (75 percent) are registered for the Spring semester.
- The retention rate (FA08 to SP09) for full-time undergraduate students is 94 percent. This compares to a four-year range of 91.7 to 93.4 percent. This is above the four-year range and well above the rolling average of 91.1 percent.
- The retention rate (FA08 to SP09) for full-time freshmen is at 91.8 percent. This compares to a four-year range of 87.3 to 91.8 percent. This is consistent with the high point of the four-year range and above the rolling average of 89.8 percent.

We are convinced that these numbers were directly and positively affected by our efforts to focus on retention. Without knowing an exact number, we can be certain that the alert system and follow-up interventions resulted in retaining a significant number of students who, in all likelihood, were seriously at risk to leave. Hopefully, these mid-year numbers translate into improved spring to fall retention rates. If so, we are optimistic that overall retention and graduate rates will increase. These successes will pay short- and long-term dividends to the university. In these uncertain times, these outcomes will be most welcomed by the institution and our students, who are striving to succeed in very challenging circumstances.



About the Author

Dr. Douglas N. Hastad has been the President of Carroll University in Waukesha, Wisconsin, since 2006. Prior to that, he served for 17 years at the University of Wisconsin (La Crosse) as a Dean, Provost, and Vice Chancellor for Academic Affairs, as well as a Chancellor from 2001–2006. He has also been a Faculty Member and Administrator at Concordia College (Moorhead), Arizona State University, Northern Illinois University, and Texas Christian University.

Dr. Hastad earned his doctorate in education at Arizona State University in 1980, his master of science degree at Washington State University in 1972, and his bachelor of arts degree at Concordia College in 1971. In 1992, he completed a course of study at the Harvard University Institute for Educational Management.

Dr. Hastad currently serves on the boards of Waukesha State Bank, Waukesha Memorial Hospital, and Wisconsin Foundation of Independent Colleges.

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