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- Questions on subscriptions, back issues, advertising, and membership information should be addressed to AACRAO, One Dupont Circle, NW, Suite 520, Washington, DC 20036-1135; phone (202) 293-9161; fax (202) 872-8857. Printed in the USA. Periodical postage is paid in Washington, DC.
- *College and University* is available on microfilm through UMI/Periodicals, P.O. Box 1346, Ann Arbor, MI 48106-1346; phone (734) 761-4700.

POSTMASTER: Send address changes to *College and University*, One Dupont Circle, NW, Suite 520, Washington, DC 20036-1135. Copyright © 2006 American Association of Collegiate Registrars and Admissions Officers.

College and University (USPS 121460) is published four times a year (summer, fall, winter, spring) by the American Association of Collegiate Registrars and Admissions Officers, One Dupont Circle, NW, Suite 520, Washington, DC 20036-1135. The annual index appears in the summer issue. The cost of the publication is included in the AACRAO membership fee. For information on subscriptions and package rates, please visit www.aacrao.org/publications/candu/. Back issues are \$30 each (price includes shipping). ISSN: 0010-0889.

INDEXES: *College and University* is indexed in Current Index to Journals in Education (ERIC), Education Index, Higher Education Abstracts and Contents Pages in Education.



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Editor's Note

Imagine you have no information system, no institutional records, no Web site, no land-line or cellular telephone coverage, and no way to communicate with staff. Dick Whiteside, Tulane University, recounts the incredible story of Tulane's survival, recovery, and renewal phases after Hurricane Katrina.

Can institutions take measures to reduce student attrition rates or are the factors that cause students to drop out just too complex? Don Hossler, Indiana University Bloomington, summarizes recent campus-based retention efforts and what is known about the roles of retention coordinators.

David Lanier, The University of North Carolina at Chapel Hill, revisits his *College and University* article "The Mission of the Registrar Today,"—published ten years ago—with a depiction of the current role of the registrar and examples of technical competencies that have become essential skills for records and registration staff members.

In spring 2005, AACRAO members responded to a survey about their experience with student information system implementations. Sharon Cramer, Buffalo State College, provides the results of the survey along with invaluable advice contributed by survey respondents and pointers gleaned from in-depth research conducted with administrators at various stages of student information system implementations.

Paul E. Pitre, Washington State University, Todd E. Johnson, Washington State University, and Charisse Cowan Pitre, University of Maryland Baltimore County, examine college choice using a consumer approach that focuses on behavioral intentions, attitudes, and subjective norms.

Travis Reindl, AACSCU, has two policy analyses: the first addresses the state of dialogue and discourse on the nation's campuses; the second looks at the need to improve secondary-postsecondary transitions to increase student success rates.

Spiros Protopsaltis, University of Colorado at Denver and Health Sciences Center, offers a commentary about the Colorado voucher system and the results of this past November's voter referendum.

How will colleges and universities use the revised Scholastic Aptitude Test (SAT)? Melisa Choroszy and Jessica Muehlberg, University of Nevada, Reno, surveyed land grant universities in the West to determine how those institutions are using the new SAT for admissions and placement.

Janet Danley, Walla Walla Community College, writes about ethical behavior in today's workplace and includes examples and concepts to guide professionals in the development of a strong belief system that will prepare them for ethical responses to moral dilemmas.

After hearing many colleagues ask if degree audit systems are worth the time and effort required for implementation, Virginia Johns, University of California at Santa Barbara, conducted an informal survey among her colleagues and reports the results of that survey.

Graham Tracey, Datatel, offers guidelines to help you successfully transition to the best registrar's office for you, your staff, and your students.

How can we improve the financial literacy of our students? Ruth Adams, Seattle Pacific University, provides some methods and justifications for helping to ensure that students are able to better manage their spending and saving.

Angela Runnals, Simon Fraser University, recaps what it was like for a student to apply for admission and register for courses over the past four decades, demonstrating the rapid rate of change in student services.



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Managing Enrollments When the Levee Breaks

The following is a speech given by Richard Whiteside, Vice President for Enrollment Management and Dean of Admission at Tulane University in New Orleans. It was presented at AACRAO's Strategic Enrollment Management (SEM) Conference, November 15, 2005, in Chicago.

 Richard Whiteside

Good afternoon. It is indeed good to be among friends.

I was surprised when Bob Bontrager contacted me and asked me to do a plenary at this meeting. I was surprised by the invitation because I am the only dean of admission in history to ever lose his entire freshman class on move-in day. In fact, I would venture to guess that I am the only dean of admission at this meeting whose institution is not, at this time, doing any teaching or research. And even when Tulane does reopen on January 12, 2006, we are likely to be doing some pretty strange things. Next semester we will house faculty and students in a variety of unusual arrangements involving cruise ships, hotel rooms, trailers, and temporary stackable dormitory rooms. Some of the administration may be living in a village of double-wide trailers—just the reward I deserve after 35 years in the academy! I am not the typical successful enrollment manager coming before you to present a “*Best Practices*” session. My guess is that none of you really want to be known as the Best Practice location for disaster recovery.

The title of this presentation is “Managing Enrollments When the Levee Breaks” and the description reads “SEM Conference veteran Dick Whiteside will recount his amazing experiences in taking care of his family, his students, and his institution before, during, and after the storm.” Wow, what a set up. I hope that I rise to the level of my press!

Preparing for this session proved to be a daunting task. I didn't have any trouble finding material. Instead, I experienced a good deal of trouble deciding what to leave out. There is so much to tell but so little time.

I may get a little emotional as I move through my presentation. For most of you this has been a bad news story. But for those of us in the eye of the event, it has been a nightmare. We live at ground zero of the largest natural disaster to ever befall this nation. We have lost colleagues—including our university bursar, a leading constitutional law professor,

and our university marshal—friends who did not make it through the storm. Many of my co-workers have no homes. All around, we see our neighbors suffering and our beautiful city battered beyond recognition. Each day we pass homes with large “X”s spray painted beside their front doors. Between the legs of the X there is a number that represents the number of fatalities found in that home. Far too many of these numbers are not zero. These search and rescue indicators serve as daily grim reminders that, despite our losses, we are among the fortunate.

Just over two months ago, I had the opportunity to witness some of nature's greatest forces at work. I saw how these forces could forever change the direction of hundreds of thousands of lives. But I am not speaking of the hurricanes that struck our cities and destroyed our homes. Rather, I am speaking of the awesome power of hope, compassion, faith, and courage. It is from these forces that the true story of Katrina emerges.

For while hurricane stories that depict looting and mass destruction may have high popular press appeal (everyone loves to watch a good tragedy), the stories that really count are those written of human effort, punctuated by human emotion and recorded only in the minds and souls of all of those who were touched by compassion and courage. These stories will endure long after the hurricane damage has been remediated. I feel compelled today to tell some of each kind of story—stories of damage done by the storm and stories of those who used the most unlikely of tools—hope, compassion, faith and courage—to alter the outcome of peoples' lives. Although the forces of nature have bent light poles, toppled trees, breached the levees, flooded our homes, and ruined our campuses—they have not broken our spirits.

Early each day my colleagues and I gather to resume the awesome task of restarting a great university. The story is the same for all affected institutions throughout the Gulf South.

Our days are long, the tasks seem at times overwhelming, and the resources available to address the problems are meager.

And somewhere in the midst of these hectic days, we also try to accomplish our own personal recovery. Many are dealing with destroyed homes and lost possessions. In the Tulane Admission Office there are a number of people who have lost everything. Yet, despite these losses, both institutional and personal, there is a sense of optimism fueled by the power of determination driven by an unflagging faith in our future. We have faith that citizens across this great nation will not turn their backs on a needy people.

And we are optimistic. We are optimistic about the future because you are our colleagues. If hurricanes are measured on a scale of one to five, then certainly we must share a category nine or ten friendship. The ferocious blasts of storms like Katrina, Rita, and Wilma pale by comparison to the strength of the friendships that have bolstered our spirit, embraced our students, and showered all of us with remarkable generosity. I want to let you know how grateful we are for all that you have done—and for what you continue to do on a daily basis.

I want to applaud those colleges who rushed to assist by allowing our displaced students to join your learning communities. In fact, the only truly adequate response to this crisis has come from the higher education community. If ever there was a question as to what the priorities are for higher education, your response provides a clear and irrefutable answer. Higher education is about our students and their learning. Understanding this, institutions waived a host of administrative requirements, opened their filled classes to still more learners, waived or deferred mandatory fees, and provided all of the support services needed by thousands of displaced students. We thank you for these not so random acts of kindness. These last few months have proven to be a victory of compassion over bureaucracy—of courageous action over complacency. We are deeply in your debt.

The brochure called me a “SEM Conference Veteran”—a moniker that can be interpreted many ways. For our purposes, let’s agree that it means that I have bounced around the enrollment management profession for a long time. Given that, you may appreciate the following statement—“Nothing I had ever done prepared me for dealing with the challenges of Hurricane Katrina. Paradoxically, however, everything I have ever done has prepared me for this moment.” This preparation made me uniquely ready to rise to the enormous challenges we face and therefore prepared us to seize the historic opportunities laid at our feet.

Because you are also enrollment managers, the state of my readiness should not surprise you. In our business, each of us is required to possess a breadth of knowledge about our institutions that is uncommon among our colleagues. As enrollment managers, we tend to be individuals who react well to change, who relish being assigned responsibility for important matters, and who are willing to put in long hours to achieve our goals. So when my institution found it necessary to jump start operations, it turned to those with broad-based

knowledge about how the institution functions and how it relates to its external constituencies. As a result, I find myself deeply involved with our recovery efforts *and* in the process of recovery, determining what Tulane University will look like in the future.

Let me move back in time and share with you a little about what happened at the end of August and what we did to become operational. I will wrap up by sharing some lessons we learned as a result of these experiences.

The normal task for enrollment managers is to get students *in* and to keep them *in*. On August 27, Tulane’s primary enrollment management task became getting the students *out*—off the campus and out of town. At 8:00 a.m. on Saturday, August 27, Tulane opened its doors to our largest and best freshman class ever. We were set up to receive 1,715 freshman and some 250 transfer students. The families started arriving early. We had more than 250 student, faculty, and staff volunteers (including yours truly) on hand to unload cars and to move the thousands of boxes and suitcases from the sidewalks into our residence halls. It was a festive occasion and spirits were high.

Going into that morning, we were aware that there was a storm in the Gulf, but we were comforted by the knowledge that the projected storm track indicated landfall of the category 2 storm nearly 250 miles to our east—missing New Orleans by a wide margin. All main-line computer tracking models confirmed that track. However, during the early morning of August 27, the National Hurricane Center revised its storm track by moving the projected strike point to a location just 45 miles east of New Orleans. They also announced that Katrina had grown to a category 4 storm with 145 mile per hour winds spreading out nearly 200 miles in all directions from the eye of the storm.

Tulane’s president, Dr. Scott Cowen, and senior staff met at 10:00 a.m. to determine an appropriate course of action. At 11:00 a.m. we implemented Tulane’s emergency plan—a plan that involved a mandatory evacuation of the campus. At 1:00 p.m. he convened a meeting of all parents and new students to announce that we were closing the campus effective 4:00 p.m. He asked new students to evacuate with their parents and to proceed to areas west of New Orleans. On a positive note, he told them that we expected to resume freshman orientation on Wednesday, August 31.

We felt confident that everything would work out because we had invested considerable time over the past several years devising a good hurricane evacuation plan. “Early Notification” is a mainstay of this plan. By “Early Notification” I mean that we activate the plan 72 hours before a projected storm strike. This allows most students time to find their own way out of town. And 24 hours before the projected storm strike, we gather up any remaining students and evacuate them to Jackson State University in Jackson, Mississippi. Jackson is approximately 180 miles inland—well beyond the reach of hurricane winds; or so we thought. Also as a part of the plan, we dispatch an advance team consisting of medical and resi-

dential life personnel—along with all of their necessary equipment—48 hours before a storm. That gives them a day to take care of logistics before the evacuated students arrive.

We had practice with the arrangement as we used it with good result when Hurricane Ivan threatened us in 2004. For Ivan, out of a student population of 13,000, we had to evacuate less than 200 students. Based on our experience, we knew that given 72 hours notice, the vast majority of students moved themselves out of harm's way. But on August 27, we did not have 72 or even 48 hours—we had just over 30. But, given the fact that all of the freshmen were with their parents, we assumed that there would be only a handful of students to evacuate by the end of the day.

At 4:00 p.m. we were stunned to learn that parents had left over 500 freshman students in our care—five times the number we believed we would have to evacuate. Throughout Saturday evening additional students continued to arrive on campus. Incoming buses were filled within minutes of their arrival on campus, sent to Jackson where they offloaded students, and then returned for another trip. The last buses departed Tulane's campus at noon on Sunday. All told, we evacuated 690 students and about 40 staff members. We were pleased with our efforts and felt that we had done a decent job. We actually joked that this would really be a bonding experience—one that might increase freshman retention. Saturday evening and all day Sunday we looked at this as the ultimate road trip—the kind of experience that gives rise to legend.

After getting the students off campus and out of harm's way, administrators were released from further duties and told to evacuate to our evacuation sites to sit out the storm. My wife and I went Birmingham, AL. Birmingham is about 250 miles inland and some 375 miles northeast of New Orleans. We arrived there with the intent of spending a night or two on the town in lovely Birmingham.

Hurricane Katrina struck the Gulf Coast between Bay St. Louis and Biloxi, MS—about 60 miles to the east of New Orleans early on the morning of August 29. The winds to the east side of the storm—particularly in the Biloxi area—were devastating. On the west side in New Orleans, the wind velocity was slightly lower but they came directly from the north hitting New Orleans after an unobstructed 26 mile run across Lake Ponchartrain. Despite the strong winds that felled many trees, damaged roofs, and left the entire area without power, New Orleanians felt very fortunate by the afternoon of Monday, August 29. The rains had cleared, the city was dry, and winds subsided to below 50 miles per hour. It appeared that the city had been spared a direct hit by a catastrophic category five storm. Everyone breathed a sigh of relief.

Late Monday however, we noted with some concern that the storm was tracking due north toward Jackson, MS. That track did not change and Katrina struck Jackson, late Monday evening and into Tuesday morning. Winds were well in excess of hurricane force and the volume of rain was incredible. Our focus Monday night was riveted on what was happening to our student evacuees in Jackson.

While we were watching the events unfolding in Jackson, things in New Orleans took a sharp turn for the worse. Several of the levees designed to keep Lake Ponchartrain out of New Orleans failed. Water rushed in from breaches in three separate locations. Within 24 hours, 80 percent of the city's land mass was flooded. In some neighborhoods, water was 18 feet deep. By early Tuesday morning, virtually all roads into and out of the city were impassable. Things were no longer manageable, in any sense of the word. Thousands of New Orleanians became trapped by rising water.

By midday Tuesday, Tulane had nearly 750 students and staff trapped in Jackson, without lights, water, or sanitary sewer services. In our medical center just a few blocks from the Superdome, rapidly rising waters trapped more than 300 medical staff and their patients. The president and 35 other "essential personnel" were marooned on our now flooded main campus. And the water level continued to rise. Help was projected to be days away and the estimates for repairing the breaches in the levees and for pumping the city dry ranged from ten days to three months.

By Tuesday afternoon, we had no information system capability (no, we did not have a back-up site.) Our entire Web site capability collapsed. All land-line telephones in the Gulf South area were inoperable and the cellular system for the 504 area code—New Orleans—was offline. All New Orleans-based radio and television stations stopped broadcasting. Cable feeds from other locations stopped. Satellite telephone inexplicably stopped working. In short, most New Orleanians were totally out of contact with each other and the outside world.

At that point in time we:

- Could not evacuate our students from Jackson, our doctors and patients from the hospital, or senior staff from the campus.
- Could not communicate with each other, our students, or emergency services personnel.
- Did not know where to find the vast majority of our faculty or staff.
- Had no access to any institutional records, either paper or electronic.
- Had no way to draw down on bank accounts and we had only the cash in our pockets to deal with the situation.

In other words—we were out of business! Those of us who had electrical power understood the seriousness of the situation in New Orleans long before those who were at ground zero. They were blissfully unaware of how bad things really were.

By Tuesday evening, the hurricane had moved north into Alabama, passing just west of Birmingham. Though weakened, it still had considerable punch. Nearly 270,000 people woke up in Birmingham on Wednesday morning to discover that they had no power and that many of the roadways were blocked by fallen tree limbs. It wasn't until noon on Wednesday that the storm had passed us by and continued to

head north leaving everything between Birmingham and the coast in utter chaos.

But what happened next was truly amazing. Totally independent and uncoordinated decision-making began to occur among the small groups of faculty and administrators wherever they were.

On Wednesday, the staff on-site in Jackson made contact with two institutions: Georgia Tech in Atlanta and Southern Methodist University in Dallas. Both institutions agreed to help. Buses were leased—no small trick given the situation in Jackson. Approximately 375 students and staff left Jackson for each location. When they arrived at their destinations, Tulane faculty and administrators worked with the students in an effort to get them home. In some cases Tulane faculty and staff used their personal credit cards to purchase airline tickets for the evacuees. By Saturday morning all of the evacuees, except one graduate student who decided that it would be a good time to go into labor, were safely back in their home communities. Although they were somewhat frazzled and tired, we were thrilled that not one student was injured during the entire experience. The good news is that on Sunday, at 6:48 a.m., the Tulane family grew by one, a 6 pound, 9 ounce baby girl.

Meanwhile at the Tulane Hospital, staff cut the light poles and guard railings off the top level of the parking garage so that helicopters could land on the roof. HCA, our partner in operating the Tulane University Hospital, arranged for a number of air ambulances to evacuate our patients and medical staff. These small helicopters airlifted four persons at a time from the garage roof. The number to be evacuated grew rapidly from the initial 300, as patients and staff members from adjacent hospitals were moved to the parking garage roof. Given the capacity of these small helicopters, it would take days to evacuate the facility. Things looked bleak.

However, a few hours into the evacuation, a larger helicopter approached—a Blackhawk. On that helicopter was an army officer who calmly stepped off and said, “OK, I’ll take it from here.” Over the next several hours, they calmly, efficiently, and effectively managed the evacuation of more than 2,000 persons. Several additional helicopters capable of removing 30 people per trip were called in to assist. Later in the day the officer was able to commandeer the use of two Chinook helicopters capable of removing even larger numbers in each trip. These large helicopters were too heavy to land on the garage. This wasn’t a problem; the pilots held them in position, flying them with the wheels barely touching the rooftop, as evacuees scrambled in.

By 7:00 p.m. we had evacuated all of Tulane’s medical staff and patients as well as a large number of critical care patients and staff from two nearby hospitals: Charity and University. Air rescue operations continued until darkness fell. Without any form of ground-based guidance systems or lights, the pilots could not land on the makeshift roof-top heliport. Air rescue was suspended for the night. Our heroes from the sky departed that evening without so much as giving us their names. Had it not been for their efforts and

skills, the casualty count in New Orleans and among our patients and staff would have been substantially higher.

Unfortunately, by Thursday morning, Charity and University Hospitals were isolated by flood waters so deep that it was impossible for them to get their remaining patients to Tulane Hospital just across the street, the only hospital of the three where a helicopter could land. The water had reached the second story in both buildings, blocking all entrances and exits. The patients and staff in these two facilities were not evacuated until early Sunday—more than six days after the hurricane struck. During that time there were a significant number of patient fatalities as food, medical supplies, and water ran out. By early Saturday, some members of the medical staff were using IV systems to keep themselves hydrated.

Early Wednesday morning the senior staff isolated in Tulane’s campus recreation center looked out across the flooded campus to see a strange sight. They saw three guys driving a man-lift. For the uninitiated, a man-lift is the piece of construction equipment that has a basket at the end of a long boom and is used to raise workers well above the heights that a ladder can reach. Their man-lift had been modified so that its air intake and exhaust pipes extended above the flood waters. There it was, driving down the flooded campus streets, three guys bobbing up and down in the basket about ten feet above the water. They pulled up in front of the recreation center and announced that they were reporting to work.

These three men had been trying to reach the campus for more than 24 hours. They were turned away numerous times by the National Guard and State Police. Finally, at one checkpoint the guard growled, “Are you essential personnel?” One of them answered, “Essential? Hell, we’re damn critical—we’ve got the beer!” Well, that did the trick! Two traded six packs and they were through the blockade! They drove their pick up truck across the top of the levee system for several miles to reach a point near campus. Then they walked to campus and as far on campus as they could go. After that they waded and swam to the maintenance shed where they built their version of the all-terrain vehicle.

These were funny guys—the classic Cajun accent and attitude. Once on site, they located the remains of a 16 foot motorboat that we used years ago to pace our crew teams. The engine was in pieces on the floor of the boat. It had a basketball-sized hole in the bottom, no gas tank, and no steering wheel. “Pookey” (how’s that for a good Cajun name?) looked at the boat with deep concern and then told the president, “This boat is ruined—it may take me a few hours.” Three hours later, he had the hole patched and the boat in running condition. When the president got into the boat for a tour of the flooded campus, he noticed that the steering wheel had a Lexus logo on it. “Where did you get the parts to fix the boat?” he asked. Pookey smiled and said, “Don’t ask, don’t tell.” They then proceeded to cruise into the second level of the parking garage to siphon gasoline from one of the abandoned cars.

Late Thursday afternoon, President Cowen and the “essential senior staff” trapped on the Uptown campus were evacuated by boat to semi-dry land, by dump truck from there to a National Guard helicopter landing zone, and then by helicopter to Houston Hobby Airport. Other essential staff members were transported to wherever their families were. Upon arrival in Houston, the group secured three sleeping rooms and one meeting room in a local hotel. These meager facilities served as Tulane-West for more than a week.

Having rescued all of our staff and patients, implemented an emergency Web presence and safely evacuated all of our students, Tulane set about in earnest to address all of the tasks associated with recovery.

But in some areas, a slow recovery was already underway. By early Wednesday morning my inoperative 504 area code cell phone began chirping incessantly. I would answer it but there was never anyone there. By trial and error, I discovered that the chirping was the result of an incoming text message from a member of my staff. Within an hour or so, I became familiar with the wonders of text messaging, which worked in the 504 area code phones while other forms of communication did not.

By using text messaging, I discovered that I had staff in St. Louis, Houston, Little Rock, Palm Beach, New York, Jackson, Buffalo, Kansas City, Los Angeles, Memphis, and other assorted locations. Everyone had the same question—what now?

After watching CNN for three days, four things seemed perfectly clear:

- We were not going home anytime soon.
- We would not have access to our normal information processing capacity anytime soon.
- If we wanted to have any chance of retaining some portion of our current student body, we needed to provide them with immediate guidance.
- If we wanted to have any chance of having a Fall 2006 class we needed to restart our recruitment efforts.

We turned our attention to what needed to be done. We set about the process of moving around our pieces of the puzzle to address these four issues. Fortunately, one of the University’s lead academic counselors had also evacuated to Birmingham. Together, we crafted a message to students that included a list of courses that they could take at other institutions and be reasonably certain that they would be counted toward their Tulane degree requirements. We compiled lists for freshmen and lists for upperclassmen that might be majoring in the sciences or humanities. We also crafted, on the spot, a transfer credit policy for the Fall 2005 term. We simply decided that all courses completed at a regionally accredited school with a passing grade would be transferred to Tulane and applied toward Tulane University degree requirements.

Once we had these lists and some narrative regarding the conditions on our campus, we approached our direct market-

ing partner, Royall & Company in Richmond, VA. We asked if they had maintained history files of our accepted and enrolled undergraduate student population. Fortunately, they had and we were able to use these files to establish communication with a sizeable portion of our continuing student population. Of course, because these files had not been synchronized with our student database after the student’s initial enrollment, we experienced a fairly high level of “bad address” data. Nonetheless, we were able to get critical information into the hands of approximately 75 percent of our current student population and virtually all of our new freshman and transfer students for the Fall 2005 semester by late Wednesday.

Our colleagues at Royall & Company also offered to provide whatever facilities and equipment we needed to jump start our undergraduate recruitment program. In fact, they invited us to make our home with them for the duration. On Friday morning, September 2, I contacted, by text message, most of my staff. The message was simple: start moving toward Richmond, VA. Be there by Monday, September 5. Use any available means of transit. Bring any undergraduate admission materials you can lay your hands on. Buy business attire not to exceed \$1,000 in cost. Buy a new cell phone that had any area code except 504.

By 3:00 p.m. on Friday our colleagues in Richmond had been able to secure twelve rooms in a Homewood Suites hotel several miles from their location. This information was text messaged to all staff. We now had a place to gather in Richmond on Monday, September 5—Labor Day.

Locating some of my key staff proved to be a laborious task. My associate director’s last known whereabouts was Jackson, Mississippi. I failed to reach him Wednesday through Saturday. He did not respond to text messages and none of his emergency telephone numbers were operating. By Sunday, I was getting very concerned so I decided to do some sleuthing. I knew his mother lived in Vermont and that she was a widow. I didn’t know where in Vermont she lived or her first name. What to do? I Googled all of the families in Vermont that had the same last name as my associate director. From the master list, I eliminated any couples or single males. The revised list contained the names of single females and those with only an initial for a first name. Three hours and many strange phone calls later, I struck pay dirt. “Oh yes, Mikey is my boy,” said the woman. So I asked, “Well, so where is Mikey? I need to talk with him.” “In Florida,” she responded, “enjoying his vacation.”

Well, I got a number and called Mikey. When he answered I said, “Mikey my boy, ya’ll can run but you cannot hide!” Seems that like me he had no idea what text messaging was and was befuddled when his phone beeped but there was no one on the line. It was driving him crazy!

I arrived in Richmond mid-day on Monday, September 5 to find a staff in shock. Many had lost their homes and everything they owned. They were worried about whether or not they would continue to be paid. Some were trying to establish contact with close friends and family. We spent a

long time hugging—some folks cried—while others just didn't seem to grasp the gravity of the situation. Truth be known, we were all on an emotional overload. At 4:00 p.m. we convened for our first working meeting and identified the tasks that needed to be taken care of. For starters, these included simple tasks like:

- Creating a new, stand-alone admission Web site from scratch.
- Editing and republishing all printed materials (we lost nearly \$500,000 worth of inventory in the flooding).
- Editing all videos to remove inappropriate passages.
- Setting up a temporary e-mail system for ourselves and 100,000 prospective students.
- Rescheduling all travel from point of origin New Orleans to point of origin Richmond.
- Transferring toll-free numbers from New Orleans to Richmond.
- Notifying all prospective students of our new location.
- Notifying all secondary school counselors of our new location.
- Creating new “market messages” that would form the essence of our response to the Katrina events.
- Setting up P.O. Boxes in Richmond to receive mail.
- Creating some temporary admission processing systems.
- Getting cash—good old American dollars for staff whose ATM cards proved useless when the banks went offline.
- And several hundred other related tasks.

As I was ticking off tasks to be completed, a first-year counselor beamed when she asked, “So dean, you’ve done this before?” It was difficult for me and disconcerting to her when I said, “Meg, nobody has ever done anything like this before. As far as I know, there is no book to follow here so we will just have to write our own.” We worked until nearly midnight and agreed to go to the “office” at 8:30. When we arrived we found that our colleagues had fully equipped a work area for use complete with our names on the doors and food in the refrigerator. We had pens, pencils workrooms, computers, filing cabinets and Starbucks coffee! They lent us technical staff to help us create a network, a Web presence, and some basic processing applications. Best of all, they gave us reserved parking spaces!

On Tuesday, September 6, Tulane University held its first post-Katrina recruitment event in Houston, Texas. Nearly 250 people were in attendance and we have not looked back since. All told, we missed two days of our recruiting schedule. As an admission office, we have lived and worked together for more than two months now. And when I say live together, that is just what I mean. We gather for breakfast every morning and finish the day with the manager’s “light supper” in the evening. We use the same grocery stores, hair cutters, gas stations, and coin laundry on the weekends. We sightsee together and go to the movies as a pack. As a result, I have come to know my staff in ways that I never thought possible. We have our good moments and our not-so-good moments. We have

supported each other as we learned more and more about what each of us had lost. And after all of this I can say only one thing about my staff: they are the finest group of people I have ever had the pleasure to work with and to call friends.

In the middle of the first week of our operations in Richmond, I was called to Houston to serve on the university-wide recovery team. The president had selected eleven people, including me, to form a “leadership cabinet.” We were to form the nucleus of our recovery efforts.

But before my scheduled arrival in Houston, I was given a day to make a trip to New Orleans to secure my home from whatever damage we might have sustained. So on September 7, I flew to Birmingham, rented a van and drove the remaining 375 miles to New Orleans. I stocked up on food, water, first aid supplies, and flashlights along the way. At a Home Depot just outside of Birmingham, I crammed the back of the van with construction supplies of all types. My mission: assess my damage and secure my home from any additional damage. When I arrived, I discovered that despite the massive devastation everywhere, I had virtually no damage to my home. I consider this irrefutable proof of the existence of God. Only the cupped hands of God over my home could have protected it from the damage sustained by my neighbors all around me. I thought that I had seen it all, but I had to change my thinking when I was offered a meal by a member of the Royal Canadian Mounted Police. As he put it, “he just happened to be in the neighborhood!”

On the trip out of New Orleans, I encountered several members of the student-run Tulane Emergency Medical Services. They were assisting with the triage of evacuees being deposited by helicopters along Interstate 10. A student told me that they had evacuated with the EMT ambulance and returned after the storm passed to assist with the recovery in New Orleans. These students ultimately decided to volunteer for the entire semester. Since early September, they have provided medical services to the victims of Katrina, Rita, and Wilma. They are being supported in their efforts by family, friends, and the kindness of strangers. They have lived on military meals ready to eat (MREs) and Red Cross shelter food for more than two months as they continue to provide relief to our friends throughout the South. They are but a few of the true heroes of the disaster.

I continued on to Houston to discover that President Cowen had declared the academic equivalent of martial law. All operating budget allocations were revoked. Normal governance mechanisms were suspended. Our normal organizational chart was discarded. We adopted a totally centralized model for decision-making. All press releases and interviews had to be approved by the president. In a real sense, everyone on the leadership group became an officer at large.

Even in the best of times Tulane is an institution characterized by a fast-paced work tempo—understaffed for all of its tasks and aspirations. Out of a staff of nearly 6,500 employees, the University operated for more than five weeks with just 60 people on task. Personally, I found myself work-

ing in two locations: Houston and Richmond, with about 75 percent of my time in Houston.

Since four days after the storm, the senior leadership team has met every day to review the prior day's accomplishments, discuss continuing issues, and to take on new assignments. Such assignments may be in familiar areas, while others are totally beyond our comfort zones. It doesn't matter—we are just expected to do them fast and to do them well. A labor negotiator became the “go to” guy for information technology. The law school dean was chosen to be head of matters academic. An MD was assigned lead responsibility for cruise ship negotiations.

Perhaps the most interesting assignments were those associated with the “rescue missions.” We mounted these missions from Houston. Each mission was planned with military precision and with clear mission objectives like “rescue the accounts receivables servers.” And given the instability of things in New Orleans, each mission also had a thorough contingency plan specifying what we should do if.... armed escorts accompanied each rescue group and at least one convoy vehicle carried emergency supplies in the event that we were forced to stay overnight in New Orleans. Missions departed Houston very early in the morning. With the help of police escorts we covered the 330 miles in just over four hours—yes we moved a little faster than the speed limits typically might allow. Return convoys left the campus at 4:00 p.m. for the return trip to Houston.

As things unfolded, it became clear that if we wanted to reopen in January, we would, on our own, have to provide everything that was needed by our students, faculty, and staff. We would have to provide temporary housing for faculty, staff, and many students who had previously lived off campus. We would have to provide K-12 education for the dependents of our employees. We needed markets for our people to shop in and local transportation to move people around the city. Overnight we became experts in FEMA regulations, cruise ship leasing negotiations, charter school creation, and other tasks required to create a self-sustaining city of 20,000 students, faculty, and staff. In 60 days we located and secured housing for more than 4,000, started a K-12 school “system,” reopened our medical clinics, and started a transit system. How many enrollment managers get to work on those kinds of tasks?

In hindsight, I have to say that Tulane moved through the same three phases that a seriously ill person might pass. Immediately after 8/29 we were in the educational equivalent of the Intensive Care Unit. We were in a survival phase. During this period things were touch and go and it was unclear if my institution could survive the blow dealt to us by Katrina. However, after a few days things stabilized and our condition was upgraded to guarded—still serious but with favorable prospects. At that point we moved into our recovery phase. We remained in this until the middle of October when it became abundantly clear that Tulane would recover and that it should never be the same. We resolved that we would emerge from this experience a stronger institution

shaped by the consequences of this natural disaster. Today, we are in the midst of our current phase—the renewal phase.

Hurricane Katrina provides us with an opportunity to rethink our mission, to reshape it in light of the events we have just experienced and the projections regarding what life will be like in the next few decades in Louisiana. And indeed this kind of fundamental reevaluation of who we are and what we do is currently underway

While I cannot share with you today the particulars regarding how we will redesign our future, I can tell you that we are looking carefully at those enduring aspects of what we are experiencing to determine what we can cull from these events that has long-term utility and value for all of us. As we look critically at our recent experience, several areas for “focus” seem apparent. Among these we include:

- The impact of race and poverty.
- Community and urban redevelopment—How can we rebuild an entire city?
- The importance of leadership in crisis situations.
- Educational and public policy-making—Can we create an urban model for high quality public education?
- Disaster relief—how to do it right.
- The interconnectivity of politics, economics, race, and infrastructure.

So, what lessons have we learned from all of this? Let me touch on five items from among the hundreds that I could list.

LESSON 1: PLAN NOW TO AVOID DELAYS IN THE FUTURE.

Any time spent in disaster recovery planning is time well spent. Although we cannot “insure” against all eventualities, we can create plans to mitigate our losses and lessen the time required to recover from natural disasters.

I would recommend that you run a simulation called “*What if We Were Tulane!*” In this exercise, you pretend that you find yourself in the position that Tulane found itself in on Thursday, September 1: no systems, no communication capability, no data, no “in-place” administrative structure, no useable facilities, no capacity to deliver classes on site, staff spread out across the country, and no access to funds. What would your university do? How would you “govern” the institution? What would you start first? Who would do what? What “creative” solutions would you use? How would you assess your losses? What value would you place on difficult to value items like works of art, research assets including data, and other items?

LESSON 2: COMMUNICATION IS CRITICAL.

The ability to communicate effectively with all constituencies is critical. If you cannot communicate you cannot coordinate critical action nor deploy resources effectively. Current and prospective students will be left confused and concerned. Faculty and staff will be wondering: What should I do? How can I help?

You can formulate your emergency communication plan *before* the emergency occurs. At a minimum you should understand how you will reestablish an emergency Web presence, who will determine content, who will host your emergency Web site, the procedures involved in getting Web traffic redirected to the emergency site, the procedures to be followed to have telephone traffic redirected, as well as other key communication elements.

LESSON 3: YOU ALWAYS UNDERESTIMATE THE AMOUNT OF PRESS COVERAGE.

America seems to love a good disaster. It's like a terrible automobile accident—horrific but you just have to look as you pass by. Immediately following the disaster you are inundated with requests for interviews, stories, tag-a-longs, etc. Everybody wants to tell your story—so much so that attending to their needs creates a huge drain on time and energies. Determine in advance who will speak on behalf of the institution and stick by that decision. Schedule routine updates and keep the press away from those struggling with recovery issues. Be prepared to sink considerable resources into this area.

LESSON 4: WHILE IT MAY BE DIFFICULT TO HAVE ALTERNATIVE SITES ON WHICH TO RUN YOUR APPLICATIONS, IT MAY NOT BE NEARLY AS DIFFICULT TO PROCESS YOUR DATA!

Data and application processing systems are two very different things. Maintaining a site that is fully configured and synchronized with your institutional application software and data represents a major investment in institutional resources. Many institutions simply cannot afford to maintain such a facility, particularly given the fact that the likelihood that you have to use it is very small.

However, that does not mean that you cannot store up-to-date data and application software off-site and out of harm's way. It also does not mean that you cannot identify, well in advance of a natural disaster, a facility that has the appropriate platforms to host your applications should that be required.

Based on my recent experience, I now view my data as a unique asset. Tulane faced two interrelated but separate problems: 1) we did not have a backup facility fully configured and ready to go, and 2) we did not have access to our data. Had we had the data, we would have had many more options available to us, particularly with regards to restarting communication streams. When I returned to campus, we implemented a routine to create an emergency data file "report" to be updated daily and stored off campus. This file contains a simplified "database" containing elements like name, address, college, program, year of study, admission status, etc. Its purpose is to allow us, if the need arises, to resume contact with students very quickly by using readily available tools to manipulate these data to create mailing lists of various kinds.

LESSON 5: MAKE EXPECTATIONS EXPLICIT BEFORE AN EMERGENCY SITUATION ARISES.

When we evacuated from New Orleans in late August, we expected to be back at our desks in a day or two. Never did we believe that we would be evacuees for a number of months. Nor did we envision that our students, faculty, and staff would be spread out across the country and that we would have no easy means of finding and communicating with them. Tulane had to wait until people felt it necessary to find us.

As a result of this event, we now have articulated the requirement that displaced persons have an affirmative obligation to make contact with us using the emergency Web site, no later than 48 hours after the site comes live. Furthermore, they have the obligation of keeping us apprised of their whereabouts during the entire period of displacement. We have also identified a "gathering spot" for key administrators and staff. We now have a temporary plan for running the University. Individuals with assigned "recovery tasks" are expected to perform those tasks on the agreed upon schedules without having to be instructed to do so.

So after all has been said and done, how will the events of the last three months impact our enrollments this spring? What are our prospects for next fall's freshman class? Unfortunately, we do not have definitive answers, at the moment, for these important questions. We will have to wait to see how these things turn out. The early signs are however encouraging. Our applications for admission are actually ahead of last year. More than 95 percent of our juniors and seniors have already advance registered for the spring. All but 58 of the 2,950 dormitory residents have indicated that they will be returning to their rooms. Although these preliminaries look good, I will not believe a single one until the students are on campus and in classes.

What we do know, however, is that current and prospective students should not be concerned about our readiness. We will indeed be ready. We have reoccupied most of our main campus facilities and all restorative work is scheduled to be completed by December 15.

In closing, I want thank you as colleagues for your concern about our well being and for everything that you have done to help us during these difficult times. We could not have taken care of our students without your help.

Thank you once again for your kind support. Godspeed.

ABOUT THE AUTHOR

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Managing Student Retention: Is the Glass Half Full, Half Empty, or Simply Empty?

This critique summarizes a recent examination of studies of campus-based retention efforts and also considers what is known about the roles and responsibilities of retention coordinators on college and university campuses. The paper closes with a call for more research on campus-based retention efforts and for a closer look at the management of retention efforts on campuses.

 Don Hossler

Why is Student Retention Important?

Student persistence through to graduation or completion of their educational goals has been an important area of administrative concern and the focus of research for many years. College and university administrators have many reasons to be interested in student persistence rates on their campuses. In 1962, Summerskill published what is widely regarded as one of the first systematic chapters that examined college student departure. In that early publication, he reported on retention statistics from the first half of the 20th Century. Since that time, a spate of studies and reports has been published that examines graduation rates of enrolled students and various reasons that campuses should be concerned about why students fail to graduate.

For administrators, the financial ramifications for their campus is an area of obvious concern. Private institutions, whose primary financial support comes from student tuition dollars, have long understood that it was in their best interest to retain matriculated students as a means of helping to assure financial stability. More recently, as state support has fallen and tuition increased at public institutions, campus administrators at these institutions have also become more interested in student persistence and graduation rates.

Institutional interest in student persistence, however, goes beyond straightforward financial incentives based on the tuition students pay. There are other reasons for university leaders to be concerned about the rates at which students drop out or graduate from their institutions. Public policymakers have also turned their attention to first year to second year persistence rates and to graduation rates. Some states have considered using graduation rates as one measure of institutional effectiveness for determining levels of state support. Perhaps more importantly, proposals have been made as part of the current re-authorization of the federal Higher Education Act to include measures of institutional effective-

ness as part of the reporting requirements for colleges and universities. Graduation rates are one of the most often mentioned possible measures.

If all of these were not sufficiently compelling reasons for campus leaders to be concerned about student persistence, the annual arbiter of quality among four-year institutions, *U.S. News and World Report's Best Colleges in America*, includes a measure of graduation rates as one of the metrics that is included when calculating the quality of a college or university. Despite all of these reasons to care about drop-out rates on our campuses, we know surprisingly little about campus-based efforts to enhance student persistence or about the efficacy of planned interventions to manage student persistence. The enrollment management literature contains many studies about marketing, admissions recruitment strategies, tuition discounting efforts, and the structure of enrollment management organizations, but there are few empirical studies of the effectiveness of retention interventions and little has been written about how colleges and universities organize or coordinate their retention initiatives. This paper will examine these issues and offer suggestions for the future.

Do Campus-Based Retention Interventions Work?

The enrollment management literature is replete with assertions about what should work with respect to campus-based initiatives to improve student persistence. There are many empirical studies designed to test theories or models of student departure, however, there is a dearth of studies that provide evidence that targeted campus-based retention interventions work. Two recent studies should give enrollment managers pause with respect to the level of confidence they should have regarding their own retention programming efforts. In one study, Patton, Morelon, Whitehead, and Hossler (in press) discovered fewer than twenty empirical

studies published in mainline higher education journals of institutional efforts to improve persistence. The authors conducted a search of published empirical studies of campus interventions published between 1980 and 2002, and found only sixteen empirical studies during this time period. Patton *et al.* also examined the quality of published research. They looked to see if the studies used criteria such as the use of control groups, sound research questions, clear specification of the research methods, and the inclusion of a large sample of students. Using these criteria the authors reported only six high quality studies; the remaining studies were classified as moderate or low quality studies.

The authors also found multiple studies that reported positive effects on student persistence for the following types of interventions: supported instruction targeted at courses in which many students evidenced poor levels of academic performance, transition/orientation/university 101 programs, and programs to enhance student-faculty interaction. They found little support for the efficacy of counseling and career planning interventions, programs to increase student involvement in campus life, and living learning, academic advising, and general academic support centers.

This study resulted in a follow-up study conducted by Braxton, McKinney, and Reynolds (in press). In an effort to assess the extent to which college campuses were implementing targeted retention programs and evaluating the effects of

these initiatives, the authors invited 47 colleges and universities in the state of Indiana (all public and private four-year institutions) to send institutional studies and reports that studied the effects of campus-based retention programs. A total of 34 documents from 16 campuses (about 34 percent of the institutions in Indiana) were submitted. After analyzing these institutional studies and reports, Braxton, McKinney, and Reynolds found that most of these campuses had not conducted campus-based studies of sufficient methodological/statistical rigor and that the majority of these campus-based studies had not used theory to guide their work. Perhaps even more revealing is the small number of schools that submitted retention studies for review. This suggests that most colleges and universities do not undertake studies of their retention programs.

The enrollment management literature regularly exhorts campuses to improve their retention efforts through interventions ranging from increased student involvement in campus activities, enhanced career planning and placement offices so that students will have clear career plans (which should enhance persistence), to high quality orientation programs. Some of these suggestions are particularly ironic, given the lack of evidence proving that they have an impact on student retention. However, the evidence to date suggests that most institutions have not developed a large number of targeted retention programs based on research and analysis or, if they

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have, they are not studying these initiatives to see if these programs result in the desired effects. Perhaps the most interesting finding is the small number of studies being conducted.

Examining Campus Efforts to Manage Retention Efforts

The findings from the aforementioned studies raise potentially interesting questions about the extent to which campuses are managing the student persistence part of their enrollment management activities. Indeed, as a result of both of these studies, I have returned to some of the earliest writings about the concept of enrollment management. Several of these writings recommend having a specific person designated to coordinate campus-based retention programs. In his early study of enrollment management efforts, Muston (1985) found that universities that had specific retention goals and had assigned responsibilities for achieving these goals were more likely to have been successful in reducing drop-out rates. Hossler (1984) and Kemerer, Baldridge, and Green (1982) also note the importance of giving management attention to efforts to enhance student retention.

However, I would suggest that on many campuses there is a dearth of focused administrative time and effort actually being given to improving student persistence. I have recently succeeded my colleague Ed St. John, who moved on to the University of Michigan, to become the director of a Lumina funded project in the state of Indiana. This project, The Indiana Project on Academic Success (IPAS), is a collaborative effort that is attempting work with public and private colleges in Indiana to design retention interventions and then evaluate their success. One of the challenges we have encountered is that many of the individuals on the campuses with which we are working have many other responsibilities. Often, very little of their time can be devoted to efforts to enhance student success and persistence.

Along this same vein, last spring one of the assignments I used for the graduate-level enrollment management class I teach was to conduct a study of the roles and responsibilities of retention coordinators on campuses. This study, like many group projects in graduate programs, is not of publishable quality, but the results support the issues we are discovering in the IPAS project. They raise interesting questions that merit further investigation. The students found that on most campuses, retention coordinators had many different responsibilities; often their student persistence responsibilities occupied less than 25 percent of their duties. On larger campuses, the students had difficulty even finding someone assigned responsibility for retention and when they did, the person might have only been responsible for retention efforts for specific student groups such as at-risk students or students of color. Most retention officers surveyed did not have a budget to initiate retention programs, and reporting lines to more senior administrators were often blurred. Overall, the results of this exploratory study raise questions about the extent to which colleges and universities are systematically focused on issues of student persistence.

Musings on Campus-Based Efforts to Improve Student Persistence

The emerging pattern from these studies and the IPAS program raise interesting questions about the state of retention efforts at colleges and universities. When the Patton, *et al.* (in press) study was first presented at meetings of enrollment professionals and institutional researchers, it was criticized with the assertion that many institutions did solid institutional studies that were never published or presented at professional conferences. The Braxton, McKinney, and Reynolds (in press) study raises the serious possibility that most institutions either do not conduct studies of the efficacies of retention interventions or at best, that they are likely simple descriptive studies that cannot establish the effectiveness of programs they purport to study.

Perhaps the lack of institutional research on student persistence begins to make sense in light of what we are learning about the status of retention coordinators. It is my hunch that what we are learning on the IPAS project, and the findings from this small class project study of retention coordinators, are illustrative of the extent to which enrollment management efforts on most campuses include a focused analytical approach to student success and retaining students. On most campuses, enrollment management activities do not include a robust set of retention programs based on an analysis of campus needs and what is most likely to work on individual institutions. Each college and university campus is unique and interventions need to be tailored and then evaluated to make sure they are meeting the needs of individual institutions. If enrollment management efforts do not include someone with sufficient time and expertise to track persistence rates, identify problem areas, allocate resources to address problem areas, and the staff time to analyze the impact of campus programs, then the findings from both Patton, *et al.* and Braxton, McKinney, and Reynolds are not surprising.

All too often, campus-based retention initiatives lend themselves to what might be called the laundry list model of student persistence programming. That is, someone on campus has read the two main strands of writing on student retention: (1) research on student persistence—usually testing theoretical models; and (2) the propositional literature in this area (short pieces, practitioner-oriented journals, and publications where campus administrators write about what they believe should improve student persistence). With this foundation they do a quick scan of their campuses and determine, “We are doing almost everything we should be doing to enhance student persistence. We have academic advising, we have orientation, we have career planning offices, we have learning communities, we have academic support centers, we have culture centers for students of color, and our faculty have frequent interactions with our students.” A wise campus administrator may be successful, for example, in arguing for more funding for academic advising so that the student to advisor ratio can be reduced so that student attrition rates can be improved. Of course, based on research to date, it is

unlikely that anyone in these situations on most campuses will actually conduct a study to determine whether or not the investment actually improved persistence rates. I would posit that on many campuses the laundry list model of managing student persistence prevails.

I would also posit, based on these two studies, our experiences at IPAS, and my consulting experiences over the past twenty years, that at the majority of colleges and universities, the enrollment management functions are focusing primarily on admissions, marketing, and the strategic use of financial aid. Retention programming is often an after thought, which leads to methods like the laundry list approach for improving student persistence.

Readers of this critique should be cautious in taking my closing observations as a set of conclusions based upon extensive data. The shortage of published studies on retention programs is clear. If the study conducted by Braxton and his colleagues is illustrative of campus-based institutional studies of student persistence, then we also have additional data to suggest that most campuses do not systematically assess the impacts of their efforts. However, these two studies, along with the patterns evident from IPAS, and the small project conducted in one of my courses, all ring true. They raise two intriguing possibilities for enrollment managers to consider:

- There is still the potential for significant improvement on most campuses with respect to focused attention on student persistence; *or*
- In most instances, the factors that cause students to drop out are complex and multi-dimensional and as a result there is little most institutions can do to directly intervene to reduce attrition rates.

Colleges and universities spend a great deal of money each year on academic and student support in areas that are supposed to improve student performance in class and enhance their chances of persisting until graduation. If these programs are not achieving their goals, perhaps scarce campus resources could be spent elsewhere.

It also appears that there is a good deal we do not know about how enrollment management efforts are structured in the area of student persistence. Some rather simple straightforward surveys and case studies could go a long way toward answering this important question. These are significant issues for the maturing field of enrollment management to consider.

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Note: This article was written as a White Paper for AACRAO's Strategic Enrollment Management (SEM) Conference, November 13–16, 2005, Chicago, IL.



The Mission of the Registrar: A Ten-Year Retrospective

Records management, database management, and business process management—what do they have to do with the mission of the registrar? This article takes a look at how well the 1995 article, “The Mission of the Registrar Today,” did in predicting the direction of the registrar’s profession and makes some new predictions about future responsibilities and future staffing. Registrars manage more than records and data; they manage many of the critical business processes of the institution. Building the right staff will be essential in accomplishing the mission of the registrar.

by David C. Lanier

It has been ten years since my article “The Mission of the Registrar Today”¹ appeared in *College and University* journal. The article was written in response to a concern that technology would make the registrar an invisible administrator. As self-service systems were being developed, registrars were apprehensive that their standing and importance would be diminished. The 1995 article stated:

As a result of technology, the registration and records functions are becoming more automated and the registrar is becoming a data manager. Data management is a wonderful responsibility for the registrar to have in the Information Age. However, there is danger lurking in the lure of technology. Technology can turn the registrar into an invisible entity on campus. As faculty and students gain more direct access to data, there is less need to come see the registrar. Is the registrar a necessary position? Will the registrar disappear?

This paper will look at the predictions made in 1995, explore how real-time processing shapes the duties of the registrar, and suggest how office staffing might change.

Excerpts From the 1995 Article

Here are a few of the points that were made in the 1995 article:

“There will be more assistant registrars or other comparable management-level positions supervising automated functions in addition to those managing the service providers.”

“Registrars should be positioning themselves as academic service leaders and student information system leaders. Registrars need to re-affirm the faculty and student services

component as well as the records technology component. Registrars now provide a service as the regulatory agency of campus academic policy. Most enforcement will be done in the future through controlling the database. By controlling the information system, the registrar can monitor the creation of new courses and programs. They monitor grades and graduation. They protect the content and integrity of the academic transcript.”

The article suggested three important functions for the registrar:

“First, the registrar can be a leader in the development of campus systems that tie the academic and administrative functions together. The registrar is in the best position to understand how information must pass through the initial entry points and be distributed to others. The basic student record maintained by the registrar has been the hub through which information has flowed to those that need it.”

“The second function of the registrar is to validate the data that is flowing into and out of the system. Consistency in the coding of information becomes even more difficult and more critical as data comes into the system from more diverse sources. The old systems permitted only experienced clerks and processors to enter and access the data. Future systems will have information coming in from numerous sources like data services, students, faculty, and other administrators. The data flowing out of the system will be accessed by people not as familiar with the coding structure of the data elements. Inconsistency in the way the data is allowed to be stored will cause confusion for people trying to understand the information. The registrar enforces academic policy and data integrity through the maintenance of system controls.”

“The third function is to be a resource to all the system users of student information. Someone must help the users

¹ The complete article is available at: <http://regweb.unc.edu/about/docs/registrar_today.pdf>.

use the system. The registrar can provide the coordination of services to assist students and faculty members in understanding how to enter information, obtain information from the system, or deal with problems with the system. By working with the system users, the registrar can determine how well the system is functioning and recommend changes to continually upgrade the system to meet the demand of the system users. The integrity and accuracy of the information contained in the system will be determined by the training and preparation of the users of the system.”

How is the Registrar Doing?

A way to gauge the validity of the predictions and assess how the registrar is doing is to ask experienced registrars for their impressions. Once a year, the registrars of the Association of American Universities² (AAU)—an association of 62 leading research universities in the United States and Canada—meet to discuss topics related to the profession. At the February 2004 meeting, there was discussion of the changing role of the registrar. A list of the institutions represented at the meeting is provided in Table 1.

Table 1: 2004 AAU Registrars Conference Attendees

► Brown University	► University of Florida
► Carnegie-Mellon University	► University of Illinois
► Case Western Reserve University	► University of Iowa
Columbia University	► University of Kansas
Duke University	► University of Maryland
Emory University	► University of Michigan—Ann Arbor
Harvard University	► University of Minnesota—Twin Cities
Indiana University—Bloomington	► University of Missouri—Columbia
Iowa State University	► University of Nebraska—Lincoln
Johns Hopkins University	► University of North Carolina at Chapel Hill
McGill University	► University of Oregon
Michigan State University	► University of Pennsylvania
Penn State University	► University of Pittsburgh
Princeton University	► University of Southern California
Syracuse University	University of Texas—Austin
Texas A&M University	University of Virginia
The Ohio State University—Columbus	University of Washington
University of California—Berkeley	University of Wisconsin—Madison
University of California—Irvine	Vanderbilt University
University of California—Santa Barbara	Washington University
University of Chicago	Yale University
► University of Colorado at Boulder	

The comments can be organized into four themes concerning the changing role for the registrar: 1) leadership in systems and technology; 2) involvement in policy; 3) coordinating campus work; and 4) greater concern for records security. Following is a summary of the comments and observations from that meeting.

² More information about AAU can be found at <<http://www.aau.edu>>.

THE REGISTRAR IS A LEADER IN SYSTEMS AND TECHNOLOGY

- Greater responsibility, sought out for expertise in technology and policy
- In a position to provide standard definitions of student, of data
- Viewed as key managers of change
- Experiencing title changes as roles change, adding titles to positions
- More multiple roles, partly because of economy, budget, and efficiency
- Awareness of scaling up of staff skills for more complex and technical tasks

THE REGISTRAR IS MORE INVOLVED IN POLICY

- Greater role in policy development—more involved at the table
- Used more as sounding board—influencing policy
- Greater role in recognizing patterns and possible policy changes
- Prompts change in procedures and policy through outreach to campus
- More involved in planning facilities and function in classrooms—more committees
- Greater responsibility to evaluate policy as good or bad
- Academic integrity (academic conscience)—detection of inconsistency, unfairness in policies

THE REGISTRAR IS A CHOREOGRAPHER OF CAMPUS WORK

- Data air traffic controller
- More responsibility vetting requests for data
- Umpire of the game—good referees do not interfere, but aid the flow of the game
- We impact how people work—working at a higher level, not old task level
- Process oriented and not task oriented
- Collaborative role—we bring groups together and they come to us for help
- Busier with more committees—need to spread that around among staff
- Recognition of centralized position of registrar—systems, budget, priorities, more visibility
- Training the service providers on campus for a larger role
- Help other offices to get new programs up and running
- Characteristic of longevity in operation of the university, institutional history
- Role of communications chief, offer one-on-one consulting

THE REGISTRAR HAS GREATER CONCERN FOR RECORDS PROTECTION

- Technology raises risk and more concern with identity theft
- Auditor findings and FERPA—who has responsibility?
- Grade change procedures—protecting security of entry of grades

- More visible because of concerns with litigation, wide knowledge of university business
- Greater responsibility for records integrity, FERPA, protection of records because of technology
- Data use and data security—greater conscientiousness of privacy of data, of access to data
- Concern about data moved to desktop—how is the data being used?

The comments from the AAU registrars are right in line with the 1995 predictions. The responsibilities and visibility of the registrar are increasing as real-time processing has dramatically changed the way campuses deliver their academic services to students. The campus relies on technology to conduct its business and this has created a greater need for coordination of functions. The registrar has become a leader in campus technology planning, implementation, and operation. The systems have become important control points for collecting and reporting accurate data, and for policy enforcement. This has led to greater responsibility in coordinating and collaborating with the many other offices on campus that depend on student systems for their daily work. As predicted, the position of the registrar plays a central role in coordinating these real-time operations.

The Real-Time Enterprise

Before 1995, computer services were delivered using a number of different platforms—through mainframe networks, through campus client servers, through telephonic interfaces with campus computers, and through Internet applications. Since 1995, the Internet has become the primary interface for the delivery of all kinds of services. The strength of the Internet for business and education is its universal accessibility and its ability to deliver real-time information and services. Universal access will continue to grow as Internet capabilities are connected to wireless technology and to a wide range of handheld devices.

In their book, *The Real-Time Enterprise*, authors Peter Fingar and Joseph Bellini discuss the impact of technology and real-time services on business. What is real-time? The authors suggest that “real-time” means delivering information “in-time” or “on-time.” The importance and value of a real-time system is to deliver actionable information in time for people to make decisions (Fingar and Bellini 2004, p. 78). The Internet has changed the architecture of business through its ability to provide customers and suppliers real-time access to information. The authors give the example of Amazon.com as a company that set the standard in delivering information to its customers through customization. The customer is presented information on products based on their own preferences, making the identification and selection of their next purchase easier.

Real-time services have added greater complexity to work management. In the book, the authors state:

Today, work management is about coordination, collaboration, negotiation, and commitment. Business is constantly changing, messy, unordered, and chaotic, and both manual and automated work activities have to progress in parallel. Work is conducted, and coordinated, at all levels, through choreography and orchestration (Fingar and Bellini 2004, p. 73).

The business of the campus is also constantly changing, messy, unordered, and chaotic. Academic and administrative departments on college campuses operate somewhat like individual business enterprises, sometimes working apart, sometimes working together, and always requiring coordination. Creative faculties on college campuses are pushing the boundaries on the methods for delivery of instruction and on traditional calendar models. The registrar works in a challenging environment where interdisciplinary cooperation is of utmost importance in order to efficiently use expensive human and physical plant resources, while departments are determined to be more independent and more entrepreneurial.

THE STUDENT INFORMATION SYSTEM AS A BUSINESS PROCESS MANAGEMENT SYSTEM

How can this chaotic environment be managed? The authors discuss the concept of the Business Process Management System, whose purpose is to store, process, and manage business processes. Business processes are all those manual and automated activities that produce the company product (Fingar and Bellini 2004, p. 70). Compare this to the purpose of the Database Management System, which is to store, process, and manage data. In sum, it holds the valuable archive of company information. The Business Process Management System provides automated and manual processes to collect, maintain, and distribute the information from the Database Management System in a real-time environment.

How does the Business Process Management System relate to the registrar’s profession? Student systems are a collection of interconnected applications for educational institutions. The student information system pulls together all the resources—instructors, courses, rooms, recruitment of students, financing of customers, billing and collection, assessment of progress toward degree, and certification of completion of work—to make the delivery of instruction happen. These systems embody all the automated and manual business procedures, and contain the controls for enforcing the rules and policies for the academic enterprise.

The registrar plays a different role in managing applications within the student information system as compared to other administrators. For example, admissions and student aid offices are also experiencing a similar evolution in their business processes, and are serving their students with more online systems and self-service applications. Admissions and student aid directors are becoming sophisticated systems managers, using their systems to analyze their student populations and make market decisions. Admissions offices review

prospect data and develop marketing and recruitment strategies, while student aid offices analyze financial data and package their aid to take best advantage of grants, scholarships, and loans. In addition, registrars manage applications and processes primarily for customers external to the registrar's office, while admissions and student aid directors manage systems primarily for use by their own staff. The registrar must consider how these applications will provide customized on-time and in-time information for others to make decisions and take action.

The registrar now spends more time managing business process systems and less time managing records. Most academic records are no longer physically archived in the registrar's office; now they are stored in the campus database. The campus IT manager has the responsibility for managing the physical storage and protection of records, and controls the database management system. The relationship between business process management and database management has created an extremely important and close working partnership between the registrar and the campus IT manager.

The following shows how course registration has changed from records management to systems and information management. In the "good old days," registrars managed course transactions. Students viewed a list of courses offered for the next term, selected their courses, and submitted course transactions to the registrar. The registrar processed the transactions, printed class rolls, and sent them to the instructors.

Course registration has now become a series of carefully timed staff activities coordinated with computer applications. The registrar provides self-service applications to deliver information about course availability, course descriptions, course restrictions, and other information to aid students in making their course selection. System controls define student access to the registration process, check course restrictions, and determine priority for courses. The system checks for academic and financial eligibility to confirm that the students are properly admitted, have no financial holds, and are academically eligible. Applications control waitlists and provide immediate information to instructors on section enrollment. Electronic class rolls provide e-mail addresses and photos to help instructors communicate with students. The electronic rolls feed electronic grade books that in turn feed grades back to the student system. Well-integrated degree audit systems suggest courses to students based on unmet requirements in their academic program, and forecast course demand to assist departments in planning their course offerings to meet the unmet requirements of their majors. While it is still important to accurately record the drop and add transactions, much more time and effort is spent providing the access to actionable information that students and faculty need to make decisions about their courses.

Staffing for Business Process Management

A significant impact of managing these real-time business processes is in office organization and staffing. More people

skilled in supervising computer supported processes and running Internet services are needed to manage these processes. How does the registrar anticipate and organize office staff for this real-time environment?

HERE ARE SOME ASSUMPTIONS TO HELP STAFF PLANNING FOR THE FUTURE

- There will be new duties not thought of today.
- The rate of change in technology will continue to accelerate.
- New technology will change the way that registration, records maintenance, and records certification are performed.

To meet the demands of constantly changing technology, a variety of skills will be necessary. Here are three areas of expertise that will be needed:

Technically Knowledgeable Professional Business Process Administrators

These administrators manage the processes and applications that make up the business process management system. These professional administrators supervise the staff responsible for delivering services to our customers. They are the public face for the office. They facilitate the essential collaboration and coordination with other parts of the campus. They understand the mission of the campus and the role of technology, and translate campus policies and procedures into workable system solutions. They work with IT staff and functional analysts to define and implement these systems. They assist students, faculty, and alumni with questions about using the student system. They plan the schedules and time-tables that control when the system is performing specific functions. They set up and maintain the system control tables and the system parameters and any other user controls that make the systems operate according to campus policies and standards.

Information Technology Staff

These positions have traditionally been found in a central IT office. However, IT specialists are becoming a part of the registrar staff as constantly changing technology and greater dependence on computer systems requires more immediate and full-time assistance. These internal IT staff complement and work with the central IT staff to support office and campus applications. These are the system and software specialists who maintain the office network systems, performing tasks such as server administration, Web administration, application programming, data reporting, and desktop equipment support. They support Web functions and other special applications that help provide information to other users. They support software and hardware for imaging, scanning, and printing. They provide report data, data files, and other statistical services for campus users.

In order to confirm this growing technical presence, a survey was sent to the AAU registrars. Twenty-two AAU schools responded to the survey question, "Are you experiencing a need for more technical staff in your office?" Here is a summary of some of the remarks from the survey:

- Yes, and it's happening fast.
- We are now 90 percent technically oriented and 10 percent administrative.
- IT provides the basic infrastructure and we provide staff to work with IT—functional analysts.
- We are always in the middle of a development project.
- Need staff for writing specifications for system implementation.
- Need people for Banner implementation.
- Need people for Peoplesoft implementation.
- Need Web developers for Web services support.
- Need data warehouse database administrators.
- Need desktop support.
- Self-service has changed the nature of our operations and changed the tasks of clerical and receptionist positions.
- New functions plus constant implementation mean a cadre of highly competent functional staff needs to be created.
- Created a position to work on managing our imaging system.
- People that work with DARS must have more technical support skills.

Functional Analysts

A new type of technical liaison is needed to manage the constant and rapidly changing technology. These functional analysts are intimately aware of the business needs and business rules for the office and may be imbedded within office sections or be under a technical supervisor. These people assist the associate and assistant registrars in managing their applications and system processes. They work as project managers and system liaisons with central campus IT people, with internal IT people, and with IT people in other departments to design and implement new applications and computer systems. Their purpose is to identify systems needs and evaluate service solutions in emerging technology. They develop and write specifications and serve as project team leaders with campus or internal IT people. They test prototypes, certify readiness for implementation, write the documentation, and train staff, faculty, advisors, and administrators in other departments. Assistant registrars or other regular staff members have been assigned these tasks in the past, but dedicated specialized staff members are needed to manage the growing complexity of real-time processing.

Smaller offices will have these same staff functions, but positions may contain combinations of these functions. For example, someone will be instrumental in managing the

parameters and tables that run the business systems. Desktop support may come from a central campus IT support staff, but one of the registrar's staff will be knowledgeable enough to help with routine office computer issues. Someone on the registrar's staff will also routinely write and run report programs to produce counts and summaries of student data.

Summary

The responsibilities of the Office of the University Registrar have grown far beyond the traditional role of custodian of records and managing records. The registrar choreographs the interaction of students, instructors, and administrators with multiple systems and complex applications. The registrar assures program quality and is the gatekeeper for the university through the management of real-time business processes. The registrar certifies the authenticity and content of academic records because of his or her role in managing these processes.

Highly trained, knowledgeable people with a variety of skills are required to administer, maintain, and improve these systems. People with more technical skills are being added to the registrar's office to help manage these business process systems. The registrar works in partnership with all technical resources available (departmental, campus, vendors) to provide seamless service to constituents.

Technology will continue to drive the mission of the registrar, as it provides the tools that the registrar needs to manage the real-time services for the campus. The goal is for the technology to become ubiquitous and invisible, but the registrar's goal remains a very visible one—communicating, collaborating, and coordinating with people. The mission of the registrar is to apply knowledge of the academic process and technology to create an environment where faculty, administrators, and students can work together. Registrars strive to make it work and make it happen.

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David C. Lanier recently retired as the Assistant Provost and University Registrar at The University of North Carolina at Chapel Hill after serving in that position for twenty years. Previously he worked in the Registrar's Office at North Carolina State University from 1976 to 1981, and was Associate University Registrar for Systems and Plans at UNC Chapel Hill from 1981 to 1985. David has a Bachelor of Arts degree from The University of North Carolina at Chapel Hill and a Master of Science in Education from Southern Illinois University at Edwardsville.

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Student Information System Implementations: A Context for Campus Change

Results of an AACRAO Membership Survey

Four out of five institutions of higher education are in the process of implementing (or significantly upgrading) their student information systems. This is more than a technical undertaking. How can a campus be attentive, right from the start, to the needs of its members, and maintain a vision that translates into a shared commitment to successfully work through the challenges?

This article places implementation work in the broader context of change initiatives. Results of a survey conducted in spring 2005 of 492 members of the American Association of Collegiate Registrars and Admissions Officers (AACRAO) are provided. The online survey contained nine multiple choice questions and one open-ended question. All ten questions addressed priorities and resources used to implement Web-based student information systems. Results are shared, and recommendations for improving implementations at institutions of higher education are provided.

by Sharon F. Cramer

It begins...

Your campus has made a decision to change your student information system¹, and you will be involved. In the privacy of your own thoughts, you imagine the future in which:

- Students access many more Web-based service options—24 hours/day x 7 days/week x 365 days/year—than they do right now.
- Students, faculty, and staff are empowered—even autonomous—as they seek information and perform transactions enabling them to work efficiently, at convenient times and locations.
- People on your campus discuss challenging topics related to student information, and reach resolution about policy or practice matters that have been points of contention for years.
- Students receive quality service on campus in new ways; service professionals are more available, since many day-to-day procedures have been automated.
- People are smiling...

Your reverie will not last long. As soon as your association with the implementation project is announced, you will notice a difference. Walk across campus, and you'll be overwhelmed and amazed at the passionate comments of your colleagues:

- "Your life will never be the same again!" confides a twenty-year campus veteran, who rolls her eyes.
- "Kiss your next few years good-bye! No plans you make will ever materialize," declares the former director of admissions.

- "You may think you know what you are up against, but you're kidding yourself. You will never be able to anticipate everything," chortles a campus pessimist.
- "Who will be your champion in the administration building?" asks an academic dean. "You need a person who is able to mandate this initiative, motivate people to be involved, as well as access resources."
- "Great! You won't believe how exciting your next few years will be!! You'll have so many insights about how to solve problems that they will wake you up in the night!" exclaims a member of the registrar's office staff who worked on the last implementation.

What is ahead of you will reveal the truth of what each of these individuals has expressed. The roller coaster ride of student information system implementation is unique for each campus. Cross-campus collaboration is not optional, it is required. The implementation taps your intellect, emotions, and stamina like little else in your academic career. You may think that you are the only person who is experiencing these thoughts and emotions, but you are not alone.

In the spring of 2005, 492 AACRAO members responded to a survey request about their experiences with student information system implementations. Fifty-one percent reported that their campus had completed 75 percent or more of a student system implementation in the past five years; a detailed summary and analysis of their experiences appears at the end of this article. In addition, advice about preparing for, and understanding various stages of an implementation are included in sidebars in this article.

¹ This change could involve any change from the current system—a move from one system to another—or a major upgrade that will require extensive campus involvement. The move from a legacy system to a purchased product is usually most challenging, but moving from one purchased product to another forces revisiting many campus assumptions as well.

Context for the Implementation

As Goldstein, Katz, and Olson (2003, p.16) explain, the successful project, which has true value to the campus, spreads far beyond the specific boundaries of the implementation project:

Technology itself has no intrinsic value. Only through its application to an institutional process or activity is value created... The cost of a project is much more than the sum of the costs of acquiring new hardware and software. It must also include the costs of deploying the technology in such a way as to produce a change in how the campus operates. It includes investments in retraining staff and the time spent altering business processes and management methods. Only through these changes do automation and improved information begin to yield value.

These “changes” in practice (to which Goldstein, Katz, and Olson refer) are the keys to a successful implementation. They do not happen suddenly. Instead, they gradually emerge during and after the integration (that is required by the implementation) of the many intertwined campus activities. Here are some examples:

BROAD-BASED CAMPUS PARTICIPATION PROMOTES RETHINKING BUSINESS PROCESSES, LEADING TO ADOPTION OF NEW CAMPUS POLICIES AND PRACTICES

- **Example #1:**² The campus “prerequisite” policy has been interpreted differently by various offices on campus. Although the course catalog indicates that prerequisites are required, the legacy registration system did not prevent students from registering for upper-level courses. Dialogue between the people who knew the functionality of the new system and the academic deans/department chairs was essential before a decision could be made about using the new system to block unqualified students from registering for inappropriate courses.
- **Example #2:** Use of the new system’s electronic wait list³ feature would allow a type of equity for students never previously available. The implementation group was confident that the functionality was reliable. However, concerns about how faculty members could remain informed and involved were expressed across campus—both formally and informally. Discussion with the campus governance unit, and within a policy advisory committee, led to a formulated recommendation and a decision by the President’s Council to use the feature as soon as possible.

INDIVIDUALS LEARN TO OVERCOME TENSION ARISING FROM DEVELOPMENT OF IDEAS THAT DEVIATE FROM PAST PRACTICE

- **Example #1:** Academic departments were concerned about how electronic grading would take place. Would the technology-proficient faculty and staff wind up entering all the grades, while the technology-deficient sat and watched? Interventions by the provost and campus academic deans, and the use of a “grading drop-in center” helped minimize the problem.
- **Example #2:** Technical solutions for nearly every challenge had been developed in the legacy system. How could an out-of-the-box product fit the needs of campus members in the same way? Individuals all across campus worried about losing the comforts of the familiar. Two years after the system was installed, there was cross-campus agreement that the benefits of new options provided by the integrated system outweighed the difficulties.

COMPLEX TECHNICAL WORK IS PRIORITIZED AND PURSUED TO MAKE THE NEW SOFTWARE ACCESSIBLE TO THE RIGHT PEOPLE ON CAMPUS

- **Example #1:** The project began under IT leadership; however, it quickly became apparent that in order to use the new product, involvement beyond the technical group was necessary. A dramatic change took place when the project group was reorganized to include members of the functional staff. Space was created in the IT Center for them, and as a result of the formal and informal conversations that began, project progress increased dramatically.
- **Example #2:** On a multi-campus implementation, the centralized IT department was responsible for setting up the new software for each campus in the system. Although the initial plans built in little time or money for travel, the turning point came with the decision to have the system programmers and developers visit each campus. The difference between this approach and the e-mail and conference call phase was noticeable; the face-to-face discussions moved the project along quickly and accurately.

These types of activities are needed for an implementation to yield value. Open dialogue uncovers the extent to which people see things the same way, identifies where they disagree, and opens the door to compromise. At the outset, these discussions seem straightforward; quickly, the number of differences of opinion outweighs the similarities.

² These examples are variations on situations occurring on campuses participating in the survey.

³ Wait lists on paper were maintained when departments had courses that drew more students than could be admitted. These paper formats, however, relied upon students to come forward, and for staff or faculty to maintain the records accurately, and the paper wait lists often could not be used in a timely way to create new courses. Electronic wait lists enable students to request admission to courses on a space-available basis, and these requests can be made during registration. Administrators can look at the size of the wait lists, and create new sections in a timely way. However, when campuses consider moving from paper wait lists to electronic wait lists, there is often concern about the effectiveness of the online system, faculty turf, and the cultural changes that will take place.

How can a campus be attentive, right from the start, to the needs of its members, and maintain a vision that translates into a shared commitment to successfully work through the challenges? This article, and the book from which it was adapted, has several points of origin:

- A research project (including an online survey, phone interviews, and completion of a research instrument—a Q-sort) involving approximately 75 members of implementation groups at ten campuses involved in student information system implementations.
- A pilot project of in-person interviews involving approximately 50 people at four campuses.
- Outreach to the AACRAO membership, through an online survey that included an open-ended question requesting advice for individuals starting a student information system implementation.
- My role as executive director of the implementation of the Oracle Student Information System at Buffalo State College.

In all of these arenas, I continued to ask similar questions. “How did you keep their perspective, and maintain your momentum throughout the implementation cycle?” “To what would you attribute your implementation success?” The one recurrent notion from respondents was that: You must maintain an open dialogue with all campus stakeholders and among implementation partners on campus.

As Goldstein, Katz, and Olson (2003, p.18) urge, such conversations are key to success:

The case for an IT investment [like a student information system implementation] must be developed and made jointly by technology...[and] academic leaders. Only through a joint effort can the full benefits of a potential IT investment be explored. Functional area leaders are in the best position to know how a technology could enhance their capability and how complex it will be to pursue that change.

The need to create a climate for collaboration is essential, and one must involve the average campus member as well as the enrollment management staff, IT staff, academics, and other members of the campus who get pulled into the centrifugal force of campus implementations. Many of them will be “first timers” actively involved in a campus-wide project that demands their intellect, reflection, and ability to compromise. While resources on campus software implementations, (e.g., Adult Learning Service 2000; Bates 2000; Beede and Burnett 1999; Fowler and Gilfillan 2003; Johnson 2000; McIntire 2004; Twigg 2000; Welsh and Kjorlien 2001; Yakovlev 2002), general software implementations (Keil 1995; Sturdevant 1999), and higher education case examples have been published (e.g., Cannon *et al.* 2004; Hochstetler *et al.*

Personal Pointers

- Be prepared to gain some new good things and lose some old good things.
- Commit to the change wholeheartedly.
- Choose a Web-based system application.
- Keep your sense of humor. Laughter will get you through many a dark hour when the conversion doesn't seem to be going well.
- Consult extensively and broadly.
- Think ahead.
- Require that all departments participate.
- Network with other institutions that have recently survived an implementation for advice on “what not to do.”
- Never underestimate the time involved. Do all your groundwork with as much input as you can handle. Always surround yourself with technologically savvy colleagues. Be flexible.
- Avoid timeline-driven implementations as much as possible. They cause great angst and produce a far less than optimal end product. Be careful that adherence to a timeline doesn't equate to ignoring those doing the implementation. Be aggressive in your planning, but have faith in the implementation team—trust their expertise.
- Funding is a key to your success.
- Celebrate the small victories.
- Give recognition for a job well done—it will go a long way.
- Bottom line in every decision—you are doing this for the students first!

1999; Kvavik and Handberg 2000; MacPherson 2000; Pennock and Bunt 2005), there is no easy-to-use resource for student information system implementation group members. Thus, this article was written to lay out issues and strategies that are intended to provoke thought and prompt action. It was designed to be a resource at the start and during an implementation, and to be used as a reference for people to extract the “lessons learned” in order to enable you to meet your implementation milestones and complete your project deliverables, as effectively and efficiently as possible.

Why is there a need to make implementations more effective and efficient? Based on data gathered by The Campus Computing Project,⁴ *The Pocket Guide to U.S. Higher Education* 2005 reported on results from a 2004 survey of 822 colleges and universities regarding the 2002–2003 fiscal year. At that time, 38.6 percent had completed a campus ERP (Enterprise Resource Planning) Project, 21.5 percent were in the process of an implementation, 4.1 percent were at the RFP (Request for Proposals) stage, and 12.4 percent were considering an implementation. While a quarter of the campuses polled (23.4 percent) reported having “no plans” for such an endeavor, three out of four campuses were involved in resource allocations related to a campus-wide implementation (p.28). Of the top IT issues “that need to be resolved for the institution's strategic success,” ERP/Information Systems/Administrative Systems was ranked third behind Funding IT and Security and Identity Management (p. 31).

⁴ Begun in 1990, The Campus Computing Project is the largest continuing study of the role of information technology in U.S. higher education. The data are published every two years by EDUCAUSE: <www.campuscomputing.net>.

Services Provided on Campus Web Sites

The services provided to students have had an increasing presence on the Web, according to The Campus Computing Project's survey (See Table 1). In addition, the number of people involved in campus implementations is increasing. For the substantial increases shown in Table 1 to occur, extensive campus collaboration must take place: discussions of data ownership, cross-departmental agreements about terminology and usage of information, as well as sensitivity to the inter-relatedness of data. This is particularly challenging since many departments have operated as "silos" of information and procedures—and in some cases, have even maintained their own "shadow" databases or computer systems. Development of a campus approach to an implementation involves an investigation of how people who have very different commitments to their institution can learn to work together to effectively serve students.

Table 1: Services on Campus Web Sites, 1998–2004

	1998	2000	2002	2004
Undergraduate admissions	55.5	75.5	88.2	94.2
Course registration	20.9	42.1	70.9	84.1
Course reserves	17.9	35.1	43.0	59.0
Student transcript	17.6	31.6	55.5	71.0
Credit card payments	5.1	18.6	40.5	65.4

*Source: EDUCAUSE, The Campus Computing Project. 2005. *The Pocket Guide to U.S. Higher Education 2005*. Washington, D.C.: EDUCAUSE (used with permission)

Graves (2002, p.40) describes the origin of this need for student services:

Much of this pressure [for IT expenditures] comes from students, who expect the immediacy and self-service made possible by the anyplace-anytime, online service modality. They are, after all, no more conscious of the Internet than their parents are of electricity, which is noticeable only when it is unavailable. So institutions with a focus on customer-satisfaction are using technology-aware instructional models and the portal's promise of integrated, comprehensive, personalizable self-service as a customer-satisfaction goal... Integrated, comprehensive, personalizable, online self-service is expected and favored by all students.

In order to achieve this goal, campus collaboration is essential. Student information systems are no longer the separate, often free-standing entities that they were in recent memory. Individuals on campus must rethink what they do, and the extent to which their actions impact other campus units.

Although these ideas are relatively straightforward, they open up a Pandora's Box of possibilities for campus members. Campus members might be:

- Invigorated by the idea of working with others on campus.
- Concerned about forcing long-standing hostilities out in the open.

- Cautiously optimistic about developing a sense of community.

To examine the process that campuses go through to move their implementation from planning to accomplishment, several underlying assumptions are presented.

Assumption #1:

Implementations of student information systems involve transformation of a campus, based on a respect for and appreciation of the "cultures" of the units involved.

Quite a few of us (Agee and Holisky 2003; Ayers 2004; Cramer and Pfeiffer 2002) separately came to the same insight about the enormity of this effort. Implementations can be seen as cultural shifts, even more than as changes of procedures, as depicted in the descriptions below:

- **What we feared the process would be:** A series of meetings, prerequisite to testing sessions, are planned for people involved in the implementation project. Although the meetings are supposed to be open forums for problem solving, the meetings quickly turn into turf battles. The most stubborn people, willing to continue the battle the longest, usually win. Gradually, people become more and more discouraged with the process. The "silos" in which people had gotten in the habit of working were not at all threatened, and although there was lip service commitment to doing things differently, nothing really changed.
- **What we realized the process had to become:** Instead of quietly hostile departments working together through a series of deadly meetings (an idea fairly common in academia), the shared work had to be re-conceptualized in significantly new ways. This work is not a co-mingling of people, but an appreciation of, and combining of, cultures. Using each others' language, asking questions about each others' procedures, we had to come to the point where we saw as much legitimacy in their concerns as they saw in ours.

Barone and Hagner (2001) specifically identified the relationship between higher education and a cultural evaluation, recommending that campuses focus on "understanding the culture, values, and sensitivities of the campus climate" (p.97). The following are insights from people who have completed implementations, and who specifically, spontaneously identified cultural change as part of the process:

- "In order to establish campus buy-in to the new system, we had to change the culture of the campus. We had to foster a culture in which proactive thinking is engrained into the campus community. If that culture has been established, we will no longer be doing things the same way in ten years. Do we see these new procedures or not? That scrutiny will be our way to measure whether or not change has really taken place." (David Alexander, Ph.D., Project Manager, Wichita State University)
- "We got to the point where we learned to balance our understanding of the big picture and to understand much

Pointers on the Process

- Maintain backups of all data on the current system for at least one year after your new system is up and running.
- Before retiring your current system, make sure the new system has been fully implemented and tested, and has adequate, functioning reporting features.
- Even when moving from one platform to another using the same vendor, never assume all the same functionality will be available. Proceed as if you were installing a brand new piece of software.
- No matter what bells and whistles the new system offers, be sure that the implementation teams remain aware that you need to be able to provide the basic services:
 - an accurate and complete transcript, no matter when the student attended; a secure way to collect grades from faculty; convenient registration for students; timely disbursement of financial aid; the ability to extract and report data for national, state and campus needs, etc. It's very frustrating for colleagues who have expended so much effort and money bringing up systems yet still feel uneasy about their results in these fundamental areas.
- Always assume that each step and the entire process will take more time, individually for you and for the team, than estimated.
- Running a public Beta site is not advised.

more about how specific offices' needs fit into the big picture. Life, culture, expectations have all been dramatically altered—we can't ever go back. What we do now is take our understanding of the offices into account when we make decisions. We work together, based on good information, and run. If the decision isn't good, go back and change it. We have enough trust in each other now that reversing a decision is not a cause for finger-pointing.” (Bob Turvey, Project Manager, University of Kansas)

■ “The process of working on implementing and upgrading our ERP system has been educational for everyone involved. We now realize that we must effectively partner together across the University for the system and our business to work both efficiently and effectively. This effort has changed, and continues to change, our culture and how we work together. It's been wonderful.” (Andy Clark, Chief Process Architect, Syracuse University)

Each of these individuals has experience with campus change, and viewed change as offering opportunities for transformation. Campus cultures are scrutinized, and undergo reform. This notion of a cultural change builds on the idea originally shared by C.P. Snow (1959, pp. 98–99):

It is dangerous to have two cultures which can't or don't communicate. In a time when science [technology] is determining much of our destiny...it is dangerous in the most practical terms. Scientists [technical people] can give bad advice and decision-makers [functional people] can't know whether it is good or bad. On the other hand, scientists [technical people] in a divided culture provide a knowledge of some potentialities which is theirs alone... At present we are making do in our half-educated fashion, struggling to hear messages,

obviously of great importance, as though listening to a foreign language in which one only knows a few words.

Many challenges must be overcome, some as basic as language. To be successful in implementations, one thing becomes immediately clear: all involved have to invest in work that has probably not been performed by any single person before. In some cases (especially at the outset) the work may look almost incomprehensible. You will find yourself needing and wanting to learn more than you ever thought would be necessary in order to make the project really work.

Those who have been through the campus implementation experience know that it is much more than participating in a series of committee meetings. The energy required to keep the goal in sight, and continue to move toward it, requires the merging of groups of people who must come to understand, and rely upon each other, if they are to succeed. This “coming together” challenges most of the core assumptions and routines that each group had separately crafted over time. You may find yourself in meetings with people with whom you have conversed, worked, and dined, and wonder how to bridge the many gaps as you try to come to agreement on key decisions related to a shared student information system.

The underlying challenge for student information system implementation is the integrated nature of the technology. Many campuses had followed a “path of least resistance” in designing “home grown” systems. Each unit in Enrollment Management (Admissions, Registration, Student Records, Billing, Financial Aid), as well as elsewhere on campus (Housing, Health Center, Judicial Records, etc.), likely had its own approach to maintaining records. In some cases, these different groups shared a database. Some units kept their own records (often referred to as “shadow systems”) and organized them as they wished; these record systems (maintained in Access or Excel, or a more elaborate software) became their primary source of information. The integrated systems, currently used in many packaged and home-grown student information system, prohibit these types of separate activities. It is as if the groups moved from “parallel play” (seen in children playing right along side each other, but not interacting) to “cooperative play” (when children are actively sharing toys and talking with each other). Ayers (2004) urges a new way to consider collaboration between the IT culture and the academic culture:

As someone who believes that the rapid development of information technologies is perhaps the most significant long-term social change of our time, and as someone who believes that the academy is among the most important of human institutions, I think we simply must find ways to get the two cultures to work together more effectively (p.62).

The notion of enabling IT and others in higher education to able to better work together is explored by Agee and Holisky (2003); they specifically describe the problems that

IT and non-IT people can have trying to understand each other:

The differences between the two cultures are further compounded by different languages. IT professionals, in particular, are often guilty of using their professional jargon as a tool to keep others away from their domain of expertise, consciously or unconsciously. How many faculty have become convinced that they could never create a Web page because some technology guru has tried to explain the process in intimidating technical detail or insisted on reviewing the minutiae of HTML coding before actually showing someone how to develop a page? (pp. 67–68)

These cultures—the IT culture, the enrollment management culture, and the faculty culture—have different habits and ways of approaching problems, and are often challenged when trying to work with together. Carr (2003) also raised the issue of cultures in higher education, with an examination of how academic cultures are impacted by technology. Although her focus is on the role that technology has in relation to classroom teaching, the challenges she identifies in her chapter entitled “Exploring Cultural Challenges to the Integration of Technology” continues recognition of the theme of cultural difficulties as one relevant to higher education.

In their book, *Higher Education in the Digital Age*, Duderstadt, Atkins, and Van Houweling (2002, pp.108–109) identified “the culture of the university” as one of the issues that needs to be addressed:

Although making the necessary investment in the technology infrastructure and support services will strain university budgets, the most critical challenges may involve the culture of the university... An important strategic issue faces most universities: should the evolution of information technology be carefully coordinated and centralized or allowed to flourish in a relatively unstrained manner in various units?

Another cultural issue involves just who within the university community will drive change. Our experience suggests that it will not be the faculty or staff but rather the students themselves who will lead in the adoption of new technology. Many of our entering students have computing skills far beyond those of our faculty. As members of the digital generation, they are far more comfortable with this emerging technology. They are a fault-tolerant population, willing to work with the inevitable bugs in ‘Version 1.0’ of new hardware and software. They not only accept but relish the uncertainty associated with innovation.

The cultures of staff, faculty, and students are brought together in the implementation of student information systems. As Duderstadt, Atkins, and Van Houweling describe, the different comfort levels of students with technology, as contrasted with those of some faculty and staff members, bring forth aspects of the “digital divide” for members of the campus.

Translating your ideas into ones that can be understood by others is part of the evolution of the implementation group. You will find yourself thinking about upcoming decisions (e.g., how to use a specific data field, the calendar guidelines to be used for setting up the system, or developing plans for testing) not only in terms of what the decisions will mean for your own unit, but also the impact that they will have on other campus units.

Fritz, Peters, and Cornelius (2002) entitled their presentation at EDUCAUSE “Using Software Implementation Projects as a Vehicle for Cultural Change in a Large Campus.” As they presented their ideas to a packed ballroom, they explained that although they had not started out to create “cultural change,” they realized that the implementation of the new system at Georgia State University triggered not only new ways of thinking, but of acting.

They identified three broad-based (“cultural”) accomplishments they wanted to see as outcomes of their student implementation. These emerged from their insights of how their implementation was having an impact on their campus that was broader than “just” implementation of the student information system. The three accomplishments are: student-friendly policies and procedures; leadership; and break down silos/unite university. These targets helped campus leaders examine project-related decisions in light of broader issues. For example, management challenges became opportunities to rethink a leadership development program, eventually resulting in leadership training led by off-campus consultants.

At Georgia State University, the establishment of campus cross-functional teams (that were more broad-based than had been originally envisioned) was another outcome of broader vision. “Key Dependencies” meetings were started, at which cross-functional issues were discussed. The campus conversations at these bi-weekly meetings provided campus stakeholders with time together to address the “must do’s to stay on track.” At EDUCAUSE, Cherise Peters, Registrar, Georgia State University, explained that the “Key Dependencies” meetings were ones that people actually looked forward to attending. People knew that they would find out what was happening, and that they were responsible for communicating the results of the discussions to their own units.

Ayers (2004, p.51), expresses multiple (at times, contradictory) viewpoints with regard to collaboration: dean, information technologist, and professor.

From the viewpoint of a dean who would love to see the transformation of higher education accelerated, and from the viewpoint of a long-time laborer in the technology vineyard who would love to see some of the fruit come to harvest, I’m struck by the many faculty members’ resistance to the obvious benefits of the maturing technologies. From the viewpoint of a professor, however, I understand some of the more obvious reasons for this resistance: shortages of time, money, and energy. In addition, I see more systemic reasons, ones that we might call ‘cultural’: deeply patterned, deeply

entrenched habits of thoughts and behavior. The problem is that the academic culture and the IT culture simply do not mix well together.

How do the campus constituencies come together, when they see the world so differently? Ayers illustrates the challenges that must be overcome in all student information system implementations. As the second assumption below illustrates, collaboration can only occur after a common set of values is created.

Assumption #2:

Implementations of student information systems require people with very different values to collaborate.

When I began working on my campus implementation, I was amazed at the number of times we thought we understood what was important to another person, but were mistaken. It wasn't a matter of not wanting to understand—we just “didn't get it.” I was frustrated by this gulf between us, and looked for ideas that could help me, and others, build a bridge across the divide.

I was surprised, and pleased, to find that my questions about how people who were so different could work together had also intrigued Howard Gardner.⁵ I made use of the work of Gardner, Gregory, Csikszentmihalyi, and Damon (2001). They examine how values in the workplace either collide, or work in concert with personal values. Their work was the basis for the original pilot research project I conducted with four campuses in the Northeast in 2003, as well as the nationwide research project with ten campuses that I completed in early 2005. Both the interview protocol and the values Q-sort developed by the authors were utilized in modified form.⁶

Curiosity about how people from various cultures work together led Gardner to investigate the topic of work in many ways, eventually leading to the founding of the GoodWork® Project. Gardner and the GoodWork® Projects Team's (2004) description of good work demonstrates what a person actively involved in a project implementation must do:

Good work happens when an individual working in a profession is able both to be highly skilled in that profession yet is also able to have a perennial concern of the implications of what he or she does. Nobody always does the right thing. Nobody always knows the implications of his or her work. But there's a big difference between people who think about the implications of their work all the time, and try to do the right thing, and people who are quite indifferent to that whole set of concerns (p.18).

As described earlier in this article, individuals working on project implementations have to know not only what their unit responsibilities are, but also have to look beyond their own arena at the needs of the entire campus. The consciousness that Gardner describes above fits well with the broadened views that many individuals achieve during their involvement with project implementations.

Second, the analysis of good work was put into the context of values. In many meetings about project implementation, individuals had to explain what was important to them—in terms of how they did their work, as well as what they did. In the following description, Gardner (2004, pp.18-19) lays out his analysis of good work:

In analyzing good work we use three terms...domain, field, and alignment. The domain refers to the values of a profession. Medicine is the best example here. The domain of medicine embodies values that go back to the Hippocratic oath... But there's also a field of medicine. The field of medicine is the current institution that is responsible for delivering health care. In the United States, parts of the field of medicine are health maintenance organizations, managed care organizations, and doctors working for those particular entities. The domain of medicine—the values of medicine—have not changed very much over the millennia or over the decades and centuries, but the field has changed enormously...

Let me introduce the notion of alignment. A profession is well aligned when all the different stakeholders want the same thing from a profession. A profession is misaligned when the various stakeholders want things to be very different than one another.... All alignments are temporary.

Translating these terms to the project implementation activities, it becomes clear why there are often challenges. The people who must work together often have different, perhaps conflicting, domains. The fields in which they have been trained are likely very different. The alignment that often serves to bring them together can be a commitment to improved student services. An implementation is an opportunity for individuals to examine what they believe in, as well as how to communicate those characteristics they consider “core” values. While working with people from different fields, the sharing of this information starts the process of moving from identification with separate units to creating, and feeling part of, a joint group.

Gardner (2004, p.26) suggests “four M's that people can do if they want to do good work”:

■ **Mission.** If you want to do good work, ...you have to say, “What is my mission and what am I trying to accomplish

⁵ Howard Gardner, the John H. and Elisabeth A. Hobbs Professor of Cognition and Education at the Harvard Graduate School of Education, is best known for his 1983 work, *Frames of Mind*, in which he introduced the concept of multiple intelligences. He helped educators, parents, and members of society understand that intelligence comes in many forms—visual, kinesthetic, spatial, interpersonal, intrapersonal, and others. His extensive subsequent work continues to explore how people make meaning of their experiences.

⁶ Copies of all instruments are available at <www.sharoncramer.com>.

in my work?'.... It has got to be something you believe in your heart....

■ **Model.** Who do you admire, and why? Who do you look up to and say, 'I would like to be a worker like them.'...?

■ **A personal mirror test.** When I look at myself in a mirror as a worker, I ask myself if I am proud of what I see or if I am embarrassed. And if I am embarrassed by myself as a worker, what can I do so I could look at myself clearly, transparently, and not feel badly about the kind of work I do?

■ **Professional mirror test.** If I look at my occupation as a whole—all teachers, all professors, all priests, all clergymen, all business people—am I proud or embarrassed about how my profession is behaving? Because even if you are doing good work, if the rest of your profession isn't, perhaps you have an obligation to work on your profession as a trustee.

Gardner's view that what you do is intertwined with who you are, and who you wish to be, illustrates the potential for campus implementation participants. As Fritz, Peters and Cornelius (2002) found out, by putting the question of "Is this practice going to benefit students?" first rather than last in discussions, they were able to change their campus culture. Student information system implementations, by their very natures, are the professional mirror test that Gardner describes. Campuses struggle to respond to their internal and external constituencies. Cantor and Schomberg (2003), in describing the need to address these two competing audiences, characterize them as the "monastery" and the "marketplace." Campuses that are able to address both sets of needs and pass the mirror tests Gardner describes take full advantage of the opportunities their implementations afford them.

Results of the Spring 2005 AACRAO Survey

A nine-question survey was prepared, with input from several AACRAO members. The request for completion of the

survey was sent twice, the first time to the membership at large (with a response of 120 persons), and the second time to registrars only (with a response from 372 persons). Here are their responses to specific questions:

WHICH TYPES OF INSTITUTIONS SHARED THEIR VIEWPOINTS?

More small institutions responded to the request for information than their larger counterparts. (See Table 2.)

Table 2: Total Enrollment Level of Responding Institutions

	n ¹	%
< 1,000	106	22.55
1,000–2,499	110	23.19
2,500–4,999	64	13.40
5,000–9,999	73	15.53
10,000–19,999	66	13.83
20,000–29,999	37	7.87
≥ 30,000	17	3.62
Total	473	100.00

¹ Only 473 of the 492 survey respondents answered this question.

PRODUCT USED TO MEET ENROLLMENT MANAGEMENT NEEDS

Overall, 50 percent of the responding institutions have purchased a single product specifically intended to meet the majority of enrollment management needs. Rather than purchasing separate products to augment their existing system, campuses sought integrated functioning across services provided by enrollment management and other campus units. This trend is true regardless of the size of the institution. (See Table 3.)

Table 3: How Student Information Services are Provided, by Enrollment

Type of System	< 1,000	1,000–2,499	2,500–4,999	5,000–9,999	10,000–19,999	20,000–29,999	> 30,000	Unknown	Total	
									n	%
1 Home grown system	15	5	9	10	14	10	5	5	73	14.84
2 Single product specifically purchased to meet the majority of campus enrollment management needs, via integrated functioning across enrollment management units/campus services	57	65	31	39	32	12	3	9	248	50.41
3 Multiple products purchased to meet specific campus enrollment management/reporting functions; integration of these products is maintained by IT on campus via a central location	14	11	10	7	8	3	2	1	56	11.38
Combination of 1 and 2	5	7	1	4	3	2	0	0	22	4.47
Combination of 1 and 3	5	3	1	0	3	4	5	1	22	4.47
Combination of 2 and 3	7	19	12	13	5	5	2	3	66	13.41
Other	3	0	0	0	1	1	0	0	5	1.02
Total	106	110	64	73	66	37	17	19	492	100.00

PROGRESS ON IMPLEMENTATION

While slightly fewer than a third of institutions participating in the survey indicated that no implementation has taken place on their campuses since 2000, the remaining two-thirds are at varying stages of progress with their work. One out of five (20 percent) of all institutions that responded were in the process of a student information system implementation. There are no patterns that correspond to institution size. (See Table 4.)

PLANS FOR IMPROVEMENT OF CURRENT STUDENT INFORMATION SYSTEM

When asked whether the institution has improvement plans for the student information system in the next five years, representatives from fewer than 100 institutions indicated no definite plans for improvements (either “no plans” or “don’t know for sure”). The remainder are involved in activities ranging from consideration of options to currently conducting implementation activities. These replies, when examined

Table 4: Last Major System Installation or Upgrade, by Enrollment (e.g., to part or all of student system)

	<1,000	1,000–2,499	2,500–4,999	5,000–9,999	10,000–19,999	20,000–29,999	>30,000	Unknown	Total	
									n	%
Major implementation currently in progress	18	21	12	17	18	12	1	2	101	20.53
75% or more of installation completed by the end of...										
CY 2004	17	11	9	11	7	5	1	1	62	12.60
CY 2003	18	8	7	10	1	1	0	0	45	9.15
CY 2002	4	14	5	4	5	3	2	0	37	7.52
CY 2001	7	5	3	7	0	0	1	0	23	4.67
75% or more of installation completed prior to CY 2001	5	7	7	8	12	2	3	4	48	9.76
No major system installation or upgrade since 2000	30	38	18	14	20	10	9	11	150	30.49
Other	7	5	3	2	3	4	0	1	25	5.08
Unknown	0	1	0	0	0	0	0	0	1	0.20
Total	106	110	64	73	66	37	17	19	492	100.00

Table 5: Anticipated Student Information System Improvements in the Next Five Years, by Enrollment (e.g., major upgrades/replacements of currently used products on your campus)

Improvement	<1,000	1,000–2,499	2,500–4,999	5,000–9,999	10,000–19,999	20,000–29,999	>30,000	Unknown	Total	
									n	%
No plans for making any changes within the next five years	9	17	7	5	2	2	0	4	46	9.35
Considering options for replacing one or more parts of our student information system via in-house development	6	2	4	5	3	2	1	0	23	4.68
Considering options for replacing one or more parts of our student information system via purchase	17	8	1	5	7	3	4	1	46	9.35
Currently actively reviewing specific alternative products for upgrading or replacing one or more parts of our student information system	15	10	5	5	5	1	4	4	49	9.96
Recently purchased new product, gearing up for implementation	1	8	7	4	6	4	1	1	32	6.50
Implementation/major upgrade is in process	15	14	10	14	13	9	0	2	77	15.65
Planning to upgrade to the next version of our current vendor-supported system	26	36	26	31	26	11	6	2	164	33.33
Don't know for sure	17	13	3	1	3	4	1	5	47	9.55
Other	0	2	1	2	0	1	0	0	6	1.22
Unknown	0	0	0	1	1	0	0	0	2	0.41
Total	106	110	64	73	66	37	17	19	492	100.00

across institutions, show that institutions of all sizes are considering implementations. Many campuses will be facing the allocation of resources (human and fiscal) to meet the needs of students, either by upgrading or replacing their student information systems. (See Table 5 on the previous page.)

RESOURCES USED FOR IMPLEMENTATION

When asked to identify all of the resources used to conduct a campus implementation, there is a clear indication that individuals involved in campus implementations (from enrollment management areas as well as technical areas), are working on these implementations while maintaining their daily jobs. As shown in Table 6, over 40 percent of those responding to the survey indicated that these concurrent assignments are used on their campuses to staff implementation activities.

When comparing implementations within the last five years (“yes” column in Table 6) with those that took place five or more years ago (“no” column in Table 6), the trends appear very similar. With regards to current/past use of full-time campus implementation teams, this approach appears to be used on a minority of campuses. The challenges facing individuals are compounded when concurrent work assign-

ments are the staffing approach used to accomplish the implementation.

OVERALL SATISFACTION PATTERNS

In considering campus satisfaction with both the process and results (see Table 7), survey participants report overall satisfaction with both. Since fewer individuals answered these questions than the earlier questions (292 responded to the “implementation process” question and 274 responded to the “implementation results” question), it is impossible to know if only those satisfied continued to respond to the survey, or if there is overall satisfaction with both process and results.

When looking at satisfaction with process and results, the results are fairly consistent across institutions, regardless of size. The high number of missing respondents makes the interpretation of these results very tentative. The pattern of satisfaction is evident in this answer, for both process and results. (See Table 7.) No single resource is linked to total satisfaction for implementation process and results. As shown in Table 8, there is some dissatisfaction with every resource used.

OVERALL COLLABORATION AS PART OF THE CAMPUS IMPLEMENTATION

The greatest satisfaction for individuals responding to this survey was in relation to the collaboration of people within the respondent’s own unit during the implementation project. Fewer than 3 percent of the 295 people responding to this question were either dissatisfied or very dissatisfied. There was high satisfaction with cross-campus collaboration among the 294 people responding to this question.

Were there patterns in relation to the way the process and results were viewed, in relation to the satisfaction with campus-wide collaboration? If individuals rated the results and process of the implementation as “satisfied” or “very satisfied,” they appear to also have been satisfied with the cross-campus collaboration.

SUMMARY OF AACRAO SURVEY RESULTS

Individuals responding to the AACRAO survey appear, on the whole, to be actively involved in upgrading or replacing their student information systems. Half the campuses that responded provide services to students through a single purchased product that integrates student information systems. Of the 492 campuses responding to the question about their plans for the next five years, only 20 percent are not absolutely sure they will be involved in an upgrade or replacement of their system (46 [9.45 percent], have no plans for an upgrade or replacement, and 48 [9.65 percent] are not sure). This means that four out of five campuses will be going through the growing pains, transitions, and learning that will challenge their campus structure and resources. The challenges of efficient, effective work on implementations will face the majority of campuses in the near future.

Table 6: Resources Used for a Recent Extensive Student Information System Implementation

Resources Used	Within the Last 5 Years?		Total	
	Yes	No	n	%
Full-time project manager from campus community	124	10	134	27.40
External project manager, either full- or part-time	65	7	72	14.72
Full-time implementation assignments for...				
<i>functional staff</i>	75	10	85	17.38
<i>technical staff</i>	84	12	96	19.63
External consulting	122	13	134	27.40
Backfill in...				
<i>enrollment management areas</i>	50	9	59	12.07
<i>technical areas</i>	34	9	43	8.79
Short-term, supplementary hires	59	5	64	13.09
Concurrent responsibilities for implementation and day-to-day operations for...				
<i>functional staff</i>	213	23	234	47.85
<i>technical staff</i>	196	18	212	43.35
Relevant training for key implementation staff...				
<i>enrollment management areas</i>	185	19	202	41.31
<i>technical areas</i>	175	17	191	39.06
Other	11	1	12	2.45

Table 7: Overall Satisfaction with Process and Results, by Enrollment

	<1,000	1,000–2,499	2,500–4,999	5,000–9,999	10,000–19,999	20,000–29,999	> 30,000	Unknown	Total	
									<i>n</i>	%
Implementation process									492	100.00
<i>Opinion highly divided</i>	14	11	3	5	6	4	3	0		
<i>Very dissatisfied</i>	8	4	2	0	2	0	0	0		
<i>Dissatisfied</i>	14	14	7	8	4	0	2	0		
<i>Satisfied</i>	31	33	22	29	26	11	1	0		
<i>Very Satisfied</i>	2	2	6	9	5	4	2	0		
<i>Unknown</i>	37	46	24	22	23	18	9	19		
<i>Total</i>	106	110	64	73	66	37	17	19		
Implementation results									492	100.00
<i>Opinion highly divided</i>	15	9	3	6	1	2	2	0		
<i>Very dissatisfied</i>	4	1	1	1	2	0	0	0		
<i>Dissatisfied</i>	9	10	6	2	1	1	0	0		
<i>Satisfied</i>	34	39	21	28	28	10	2	0		
<i>Very Satisfied</i>	5	2	9	10	4	4	4	0		
<i>Unknown</i>	39	49	24	26	30	20	9	19		
<i>Total</i>	106	110	64	73	66	37	17	19		

Table 8: Satisfaction with Resources Used

Resource Used	Opinion Highly Divided	Very Dissatisfied	Dissatisfied	Satisfied	Very Satisfied	Unknown
Full-time project manager from campus community	20	7	17	68	17	5
External project manager, full- or part-time	17	6	10	28	8	3
Full-time implementation assignments for...						
<i>functional staff</i>	14	4	11	42	12	2
<i>technical staff</i>	12	5	15	48	14	2
External consulting	22	7	26	61	15	4
Backfill for...						
<i>enrollment management areas</i>	9	1	7	32	6	4
<i>technical areas</i>	6	1	7	21	5	3
Short-term, supplementary hires	12	4	9	27	8	4
Concurrent responsibilities for implementation and day-to-day operations for...						
<i>functional staff</i>	38	15	45	112	20	6
<i>technical staff</i>	36	11	35	108	19	5
Relevant training for key implementation staff (technical)						
<i>enrollment management areas</i>	26	10	39	106	18	5
<i>technical areas</i>	27	9	32	99	20	5
Other	6	0	2	3	0	1

Table 9: Satisfaction with Collaboration (Within Unit and Across Campus)

	Very Dissatisfied		Dissatisfied		Satisfied		Very Satisfied		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Within Unit	2	0.68	8	2.71	144	48.81	141	47.80	295	100.00
Across Campus	5	1.70	51	17.35	187	63.61	51	17.35	294	100.00

Conclusion

Whether you build or buy, any change in the student information system becomes a catalyst for cultural re-engineering on your campus. The questions you will be asking yourself during the implementation are these:

- How do we do our work?
- What is the work we do?
- How does our work intersect with the greater ecosystem of our campus?

Your campus will face implementation challenges whether or not you decide to make use of the implementation to address broader goals to reconsider, and reconceptualize your institution. As Kidwell, Vander Linde, and Johnson (2000, p.31) remind us:

A key ingredient in an institution's readiness... is its culture—the beliefs, values, norms, and behaviors that are unique to an organization. Informally, it is the unwritten rules, or 'how things really get done.' Higher education is moving from the old culture that considers, 'What's in it for me?' to a new culture that says, 'What's in it for our customer?'

The student information system implementation is an opportunity to use Gardner's mirror tests (described earlier in this article), and to ask Kidwell, Vander Linde, and Johnson's question ("What's in it for our customer?") and answer it in a way that makes us proud. The campus transformation prompted by implementations (Cramer 2002, 2003a) cannot take place overnight. Careful attention to the change initiatives that will occur within and across units during implementations can help the initiatives to be smoother (e.g., Bridges 2003), but all on campus will be affected by the types of system-wide changes that take place.

The success of implementations depends on many things, including the functionality of the software. If both the vision and commitment of campus leaders translates into budgeting for training, consulting, and backfill, as well as reassignments for the implementation team members, then the kinds of issues described throughout *Student Information Systems: A Guide to Implementation Success* can be systematically addressed. Support for the implementation team members (who must include individuals from the enrollment management units, IT department(s), faculty, and other key stakeholders) consists of giving them the room they need to grow into people with new capabilities, and new frames of reference. As Kegan and Lahey (2001, p. 185) describe below, people about to undergo transformation need a nurturing environment within which risks can be taken, and conversations that challenge assumptions can take place:

We need a 'holding environment,' a place in which to participate safely in the types of conversation that help us fully engage our investigation of the...force[s] within us. The

Note: This article is adapted from Chapter 1 of *Student Information Systems: A Guide to Implementation Success*, by Sharon F. Cramer, published by AACRAO in October 2005. It is being republished with permission. Copies of this publication can be purchased online at <https://www.aacrao.org/forms/PublicationForm/>, or by phone at (301) 490-7651.

motive to disturb our own pattern of thinking is important but still just a spark; the first glimpse of our... assumption[s] are, at best, tinder. In order to carry on the work, the spark must become a flame. The [study of inner] languages are intended to be a steady supply of oxygen to keep the flame burning for as long as our learning may need.

With careful planning and attention to pitfalls, campuses implementing new student information systems leave staid thinking behind. Those willing to "disturb [their] own thinking" will find that their implementations are the gateway to new opportunities, alliances, and ultimately to a transformed campus environment.

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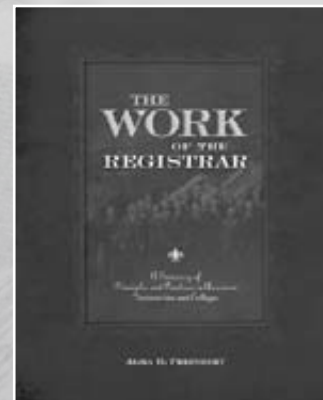
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Understanding Predisposition in College Choice: Toward an Integrated Model of College Choice and Theory of Reasoned Action

This article seeks to improve traditional models of college choice that draw from recruitment and enrollment management paradigms. In adopting a consumer approach to college choice, this article seeks to build upon consumer-related research, which centers on behavior and reasoning. More specifically, this article seeks to move inquiry beyond the analysis of student characteristics to begin to incorporate a focus on behavioral intentions, attitudes, and subjective norms that may also have an impact on student college choice.

by Paul E. Pitre, Todd E. Johnson,
and Charisse Cowan Pitre

College choice is described as the process that students experience in transitioning from school to college (Hossler, Braxton, and Coopersmith 1989; Hossler and Gallagher 1987; Litten 1982; Paulsen 1990). A problem that exists with many contemporary models of college choice and empirical studies that utilize these models is they fall short in their ability to account for the experiences of racial and ethnic minority students. With an increasing emphasis on college attendance and the changing demographics of the college-age population, college officials and policymakers are in need of more specific information regarding student college choice processes in order to increase their effectiveness in developing programs and marketing campaigns that can have an impact on a broader student demographic.

The current literature on access to college tends to center on general recruitment and retention models of college choice. These general models focus heavily on student characteristics (MacGowan 2000; McDonough 1997) but they fail to provide information on the consumer-related behaviors of key student market segments. By focusing in on student characteristics, these models do provide clear variables for statistical analysis, but they do not account for behavioral aspects of student college choice processes.

Marketing activity that is based on general models is less apt to be effective than efforts that directly address the particular needs or behaviors of individuals, or groups of similar individuals—if they differ in these respects. It is equally important to ascertain when groups do not differ, since standardized recruiting efforts are less costly than differentiated efforts.... This can only be done, however, after differences in consumer behavior have been ascertained (Litten 1982, p. 384).

This article proposes a theory that broadens college choice to include a consumer focus that introduces student behav-

iors related to college choice and its processes. More specifically, this article operationalizes the Theory of Reasoned Action within a college choice framework, focusing on the predisposition stage in order to enhance the prediction of students' true predisposition for college attendance.

According to Konerding (2001), empirical research is based upon concepts and theory that have been developed a-priori to actual studies. This article seeks to expand and develop the concept of college choice and begin to explore a new model that can be empirically analyzed. In doing so, this article has three primary focuses. First, it provides an analysis of the predisposition stage of college choice utilizing literature on African-American students as a college choice market segment to point out the structural gaps in contemporary college choice theory. The second aim is to provide an overview of the Theory of Reasoned Action and its relevance to college choice. Finally, this article operationalizes the Theory of Reasoned Action to extend and improve upon contemporary models of college choice. This article argues that in combination, general college choice models and the Theory of Reasoned Action can provide a more comprehensive explanation of the predisposition stage of college choice, which includes a focus on student college-related behaviors, attitudes, and subjective norms. College choice and its focus on student characteristics provide a baseline for the development of a new approach to understanding student college-related decisionmaking processes, which include key aspects of the Theory of Reasoned Action.

College Choice

Most contemporary models of college choice utilize elements similar to the three stage model developed by Hossler and Gallagher (1987). The Hossler and Gallagher model of college choice focuses on three stages: 1) predisposition, 2)

search, and 3) choice. In the predisposition stage, students determine whether they will pursue postsecondary education. Key variables associated with predisposition for college attendance, as highlighted in the review by Hossler, Braxton, and Coopersmith (1989), include student aspirations, academic achievement, and support and encouragement students receive from significant others such as parents, high school counselors, and teachers.

The second stage, referred to as search, focuses on a student's ability to gain information characterizing the type of institution he or she may want to attend. At this stage the provision of information by the school is essential as students seek to gain knowledge of methods for evaluating college options (Hossler, Braxton, and Coopersmith 1989). Availability of information related to college access is an important factor in the college choice process (Freeman 1997; McDonough 1997; Terenzini, Cabrera, and Bernal 2001). In the third stage, referred to as choice, students narrow their school options in order to make a final decision about which institution to attend.

Problems in Predisposition

Predisposition, the earliest stage of college choice, contains aspects of school context, student demographics, student academic and personal attributes and abilities, as well as environmental and economic factors. These factors are supposed to act on students in such a way that enables them to begin to form a predisposition (or aspiration) for college attendance. In college choice studies, students' predisposition for college attendance is often represented by aspirations (Bateman 1990; Hossler, Braxton, and Coopersmith 1989). As in predisposition, student aspirations are supposed to be dependent upon a combination of other variables such as "SES, student ability/achievement, and parental expectations" (Hossler, Braxton, and Coopersmith 1989, p. 259). According to MacLeod (1987, p.13), aspirations are defined as "an individual's view of his or her own chances for getting ahead and are an internalization of objective probabilities." This broad definition includes occupational aspirations as well as educational aspirations. Educational aspirations, though, are said to be "an idealistic value orientation toward education" (Morgan 1996, p.308).

African-American students are said to have some of the highest aspirations for college attendance (Kao and Tienda 1998; Orfield and Paul 1994; Sirin and Rogers-Sirin 2005). However, college-related aspirations dwindle as these students advance through high school (Kao and Tienda 1998; Sirin and Rogers-Sirin 2005). Some researchers have found that an aspirations/achievement paradox exists among African-American students (Carter 2002; Kao and Tienda 1998; Pitre 2002). An aspirations/achievement paradox suggests that although African-American students have been found to have some of the highest aspirations for college attendance, they score low on measures of academic achievement that would make them competitive for college admission.

The importance of the development of early aspirations is related to research that states that the aspiration to attend college can increase the probability of actual attendance by more than 20 percent if that aspiration is developed by the 10th grade (Alexander and Cook 1979; McDonough, Ventresca, and Outcalt 2000). However, for African-American students who experience an aspirations/achievement paradox, the aforementioned findings related to early aspirations may not apply.

Several studies have found that parental education has a strong effect on students in the predisposition stage of college choice (Hossler, Braxton, and Coopersmith 1989; Manski and Wise 1983). Parents of African-American and Hispanic students attain less education than parents of White students (Freeman 1997; Perna 2000) which can, potentially, lower educational aspirations (Moore, Ford, and Milner 2005; Smith-Maddox 1999).

Smith-Maddox (1999) reported some of the types of parental involvement in a students' education as parents seeking to "gain advantages for their children," a form of social capital (p.173). Smith-Maddox found that social resources, such as outside school activities, parental education, parental involvement, and parental expectations were positive sources for building educational aspirations in African-American 8th graders. Bateman and Hossler (1996) studied African-American and White high school students on measures of predisposition for college attendance and found that parental influence had less of an effect on the college aspirations of African-American students than it did on White students.

Student academic ability is said to be another variable that influences educational aspirations and thus predisposition for college attendance. Hossler, Braxton, and Coopersmith (1989) found that high school track, often considered a measure of academic preparation because it often dictates the types of courses a student takes, has an effect on college choice. Adelman (1999) found that curriculum intensity had the strongest relationship to college completion for African-American students when compared to other measures, such as test scores and a combination of class rank and grade point average (GPA). High school curriculum was found to be highly correlated with college completion, but it may be a factor that works against African-American students in many instances. Oakes (1985) contends that tracking is an integral part of the secondary educational system in the U.S. that often works to the detriment of low income and minority students, dampening the value of their school experience.

Researchers have also reported difficulties in predicting the college aspirations of African-American students, while successfully predicting the aspirations of White students (Bateman and Hossler 1996; Hossler, Schmit, and Vesper 1999). This latter point may be an indication that current models of college choice are not suitable for predicting African-American student aspirations for college attendance. In sum, African-American students have been found to have a different experience in the predisposition stage than their White counterparts.

As mentioned previously, this article seeks to further traditional models of college choice that take a recruitment and enrollment management focus centered on student characteristics. In furthering these models, the authors incorporate a consumer-behavioral approach to college choice. According to Bagozzi and Warshaw (1990) the primary focus of consumer research centers on behavior and reasoning. Similarly, this article seeks to move inquiry beyond the broad analysis of student characteristics to begin to incorporate a more detailed focus that includes the behavioral intentions, attitudes, and subjective norms that may also have an impact on student college choice.

Theory of Reasoned Action

The Theory of Reasoned Action stipulates that an individual's behavioral intention (*i.e.*, the subjective probability of performing a behavior, like preparing for college) is the single best predictor of whether or not he or she will engage in a behavior (Fishbein and Ajzen 1975). Behavioral intention is, in turn, determined by a person's attitudes toward a behavior and subjective norms.

The Theory of Reasoned Action has been widely researched in relation to consumer behaviors such as purchasing automobiles, banking services, computer software, coupons, detergents, and soft drinks (Sheeran 2002; Sheppard, Hartwick, and Warshaw 1988). Researchers have also used the Theory of Reasoned Action as a framework that is robust enough to explain and predict behaviors while providing a useful guide for designing intervention strategies to replace, alter, or maintain behaviors (Ajzen and Fishbein 1977; Sheeran 2002; Sheppard, Hartwick, and Warshaw 1988).

Behavioral Intention

Fishbein and Ajzen (1975) define behavior as "Observable acts...that are studied in their own right" (p.13). Surveys, questionnaires, and verbal responses from participants are not considered behaviors, but instead are effective in inferring intentions, which can then predict behaviors. Fishbein and Ajzen (1975) define behavioral intention to mean that "the strength of an intention is indicated by the person's subjective probability that he will perform the behavior" (p.12). The Theory of Reasoned Action posits that behavioral intention (*i.e.*, the subjective probability of performing a behavior like preparing for college) is the best predictor of an individual's actual behavior (Fishbein 1980; Ajzen and Fishbein 1980).

Sheppard, Hartwick, and Warshaw (1988) provide support for the focus on behavioral intentions following an exhaustive meta-analytic review of literature regarding attitude-behavior research. In addition to general support for the Theory of Reasoned Action, the researchers also found that that the relationship between intention and behavior can be enhanced if the following three criteria are met: (1) the measure of intention corresponds to the behavioral criterion with regards to action, target, context, and time; (2) the intention does not change between the time interval of the assessment

of the behavioral intention and the behavioral observation; and (3) the behavior under consideration is under volitional control (Sheppard, Hartwick, and Warshaw 1988).

In predicting behavior, there is an important distinction between predicting individual behavior and predicting the behavior of a large sample of people. The latter tends to produce more stable intentions over time, because idiosyncratic events are likely to balance out at the aggregate level (Ajzen and Fishbein 1980). This is significant, given that longer-term predictions are more likely to be used to forecast or project behavioral trends in large segments of the population. Intentions at the individual level, such as choosing to attend college, however, tend to be more volatile over time. Many interceding events can produce changes in intentions at the individual level. For example, a person's original intention to choose to attend college could be disrupted by family financial problems.

Overall, Ajzen and Fishbein (1980) contend that human social behavior is not controlled by unconscious motives or desires, nor can the behavior be characterized as without thought. "People consider the implications of their actions before they decide to engage or not engage in a given behavior" (Ajzen and Fishbein 1980, p.5). According to the Theory of Reasoned Action (Ajzen and Fishbein 1980; Fishbein and Ajzen 1975), there are two immediate determinants in the formation of behavioral intentions. These are attitudes and subjective norms. An understanding of each is important because in order to predict a person's behavior, it is necessary not only to understand why he or she performed a given alternative, but also why he or she did not perform the remaining alternative(s).

Attitude

The Theory of Reasoned Action stipulates that attitudes are partly based on a person's evaluations of behavioral outcomes, such as the outcomes related to engaging in preparation for college (Ajzen and Fishbein 1980). These evaluations can be positive or negative. Attitudes toward a behavior, like college choice, are composed of two components: (1) beliefs about the outcomes a behavior might yield, and (2) an evaluation of the outcomes of a behavior and its consequences to determine whether they will be favorable or unfavorable (Ajzen and Fishbein 1980). For example, if an individual considers college as having favorable consequences, then the individual's intention to engage in behaviors related to attending college is increased. Recent research has also shown that attitude can be effectively measured by assessing how much an individual likes or dislikes performing a behavior (Finlay, Trafimow, and Jones 1997; Trafimow and Finlay 1996; Ybarra and Trafimow 1998).

Attitudes are also learned. They are generally considered to constitute residues of past experience (Campbell 1976; Fishbein and Ajzen 1975). Thus, when these features are combined, attitude can be viewed as a "learned predisposition to respond in a consistently favorable or unfavorable manner

with respect to a given object” (Fishbein and Ajzen 1975, p.10). In this particular case, the object considered is college—which includes college choice processes.

Each student forms beliefs about college. Each belief connects college to an attribute. The evaluation of these attributes results in a student forming an attitude toward college. A positive belief, however, does not necessarily produce a positive attitude toward college because students can simultaneously hold positive and negative beliefs about any given object. Attitude formation is linked to a set of attributes, rather than one particular attribute. Thus, students will tend to have a favorable attitude toward aspects of college that they associate with a positive set of attributes, and vice versa; but any given belief within that set will not, in and of itself, determine the attitude toward college. For example, an African-American student may believe that attending a major college would provide an outstanding experience, but his or her attitude toward the college may be negative or neutral if he or she also believes that the college is primarily made to appeal to those students in the advanced placement curriculum.

Subjective Norms

In contrast to attitudes, subjective norms are a function of normative beliefs about the social expectations of significant others (*e.g.*, counselors, teachers, parents, peers, etc.) and an individual’s motivation to comply. In other words, subjective norms are the social cues and pressures an individual perceives when making a behavioral decision.

Because subjective norms are social substance, they influence the social environment in which a student develops intentions to perform college-related behaviors. The term “subjective norm,” in this context, is more narrowly defined than the sociological view of norms. It refers to “a specific behavioral prescription attributed to a generalized social agent” (Ajzen and Fishbein 1980, p.57). Therefore, subjective norms are a person’s perception of what he or she thinks significant others prescribe for him or her regarding performance or nonperformance of a specific behavior, like preparing for college. According to the Theory of Reasoned Action, a student’s intention to perform a behavior is greater if that student perceives significant others’ desire for him or her to do so. Likewise, if the student perceives that others who are important think he or she should not perform the behavior, the student will usually intend not to do so (Ajzen and Fishbein 1980). It is clear that subjective norms can influence a student’s decision to perform college choice-related behaviors.

Integrated Model of College Choice and Theory of Reasoned Action

There are three types of college choice models: econometric, sociological, and combined. Econometric models explain the college choice process in monetary terms, as rates of return on educational investment (Hossler, Braxton, and Coopersmith 1989; Manski and Wise 1983; McDonough 1997). Sociological models of college choice focus on the influence of schools,

parents, peers, and teachers (McDonough 1997). In a combined approach, researchers combine the strongest variables in the aforementioned two approaches to facilitate more accurate predictions (Hossler, Braxton, and Coopersmith 1989). This article offers a new integrated model of college choice that includes the behavioral aspects of the predisposition stage (see Figure 1.).

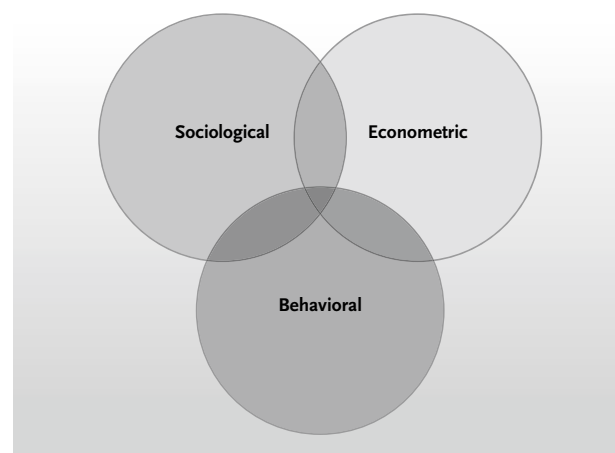


FIGURE 1: RELATIONSHIP OF CURRENT COLLEGE CHOICE MODELS WITH INTEGRATED MODEL

The predisposition stage of college choice models consists of student socioeconomic status, academic ability/achievement, parental expectations, and other variables primarily related to the school and the general social context (Hossler, Braxton, and Coopersmith 1989, p.259). The model proposed here extends current models that focus on the predisposition (aspiration) stage of college choice as a product of student characteristics. The proposed integrated model includes behavioral intentions. In order to provide a more accurate description of aspiration for college, evidence of a student’s behavioral intentions (*i.e.*, attitudes and subjective norms) must also be measured (see Figure 2).

Again, it is important to note that student attitudes toward college are generally linked to a set of attributes or characteristics as opposed to a singular characteristic related to college attendance (Johnson, Halpin, and Halpin 2001). These attributes or characteristics can be both positive and negative. For example, African-American students could hold positive attitudes about certain attributes of college attendance, such as getting away from home, meeting new people, and preparing for the future, while holding negative attitudes towards taking the SAT or other standardized tests, mathematics, being grouped with the type of student who takes a college preparation curriculum, and the need to be concerned about college so early in their high school experience. These attitudes can be important pieces of information for strengthening college choice models and their ability to predict the postsecondary education choices of ethnic and racial minority students.

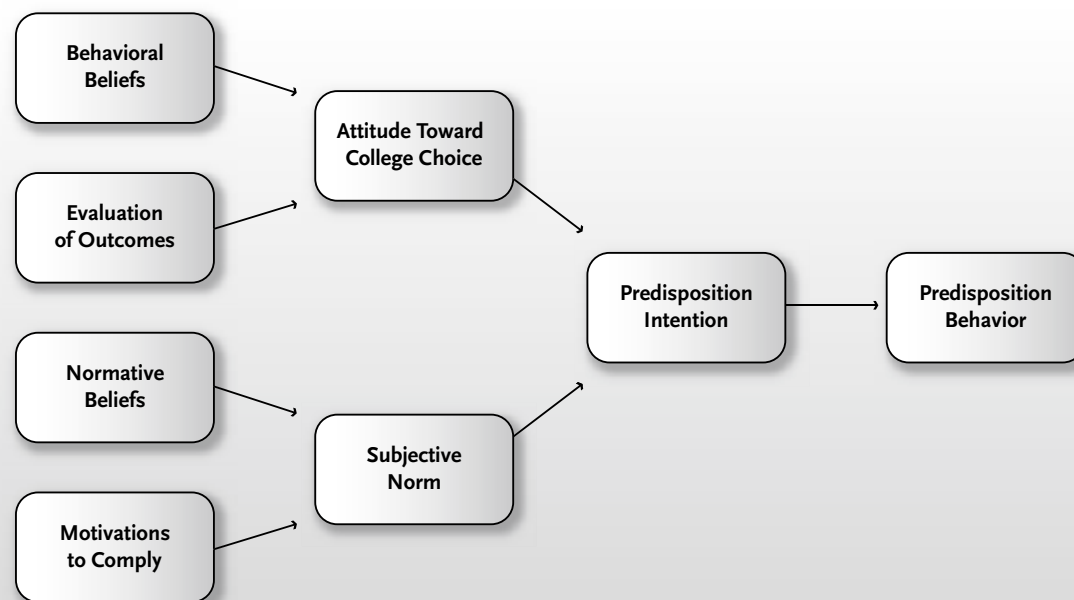


FIGURE 2: THEORY OF REASONED ACTION AND PREDISPOSITION BEHAVIOR

As mentioned previously, several college choice studies have uncovered an aspiration/achievement paradox among African-American students (Carter 2002; Kao and Tienda 1998; Pitre 2002). Essentially, African-American student aspirations for college attendance do not match their actual grade performance or academic preparation. Mickelson (1990) described some students' general knowledge of education and potential educational outcomes as abstract in comparison to the more concrete educational knowledge and experiences held by other students.

Students' school experiences may have an effect on whether or not they can make a concrete assessment of the value of something like college attendance. Additionally, without concrete experience related to college attendance and limited access to knowledge surrounding college and the college choice process, African-American students may draw their own conclusions related to college attendance based on faulty assumptions. For instance, Bateman (1990) found that academic achievement was a significant factor in the development of aspirations for college attendance of African-American males, but not significant for African-American females. Bateman (1990) interpreted this to mean that:

[African American] males perceive themselves as needing higher levels of [academic achievement] than other populations to pursue postsecondary education. Some populations may interpret higher levels of student ability as increased incentive to pursue postsecondary education, while [African American] males may perceive higher levels of [academic achievement] as necessary (p.60).

So, in essence, if an African-American male student does not perceive himself to be a top student with respect to GPA, he may develop an attitude that says, "I am not college material." This attitude could also exist because the student lacks knowledge and/or experience related to college choice processes. Fazio (1986) indicated that there is a stronger statistical relationship between attitude and behavioral intention when an attitude is based on direct experience and that experience is cognitively accessible.

Subjective Norms

The internalization of subjective norms plays a role in the aspiration/achievement paradox as well. In existing models of college choice, such variables as teacher encouragement, parental encouragement, and peer influence are taken into consideration. In fact, parental encouragement is said to be a strong predictor of a student's aspiration for college attendance (Paulsen 1990). But, once again, the parental encouragement variable is less significant in predicting the aspirations of African-American students (Bateman 1990; Kao and Tienda 1998). In looking at subjective norms, the model of college choice described here takes social support variables one step further and begins to analyze how students perceive this type of support.

In applying the notion of subjective norms to the college choice process, subjective norms refer to a student's personal analysis of the opinions of significant others with regard to college attendance (Ajzen and Fishbein 1980; Johnson, Halpin, and Halpin 2001). Subjective norms also impact the environment in which a student performs a college choice

behavior (Johnson, Halpin, and Halpin 2001). Pitre (2005) found that students who believed high school was not preparing them for college were less likely to aspire to college attendance. This finding can be interpreted in several different ways. Examining this finding through the lens of subjective norms, questions immediately arise in relationship to the types of norms that exist in schools and how those norms are perceived by students. This finding suggests that some subjective norms—or even hidden policies—related to college attendance that exist in schools may have a negative impact on certain students.

Hossler, Schmit, and Vesper (1999) explain that academic achievement affects a student's ability to maintain aspirations because parents, teachers, and counselors are more likely to support the aspirations of those students who display higher levels of academic achievement. The lack of support exhibited by significant others, if accepted as subjective norms by students, could result in dampened aspirations for some African-American students. African-American students exhibiting lower levels of academic achievement may not receive "aspiration support," resulting in lower or reduced aspirations for college, and creating a cycle that could also inhibit motivation for increasing academic skill levels (Pitre 2002). Additionally, if these students are not perceived as "college-going," it is likely they will not gain the proper social cues, support, resources, and assistance needed to prepare for col-

lege. The subjective norms and attitudes attached to the lack of support that students may experience as low to moderate academic performers may bar students from the college choice process altogether.

Freeman (1997) found that African-American students perceived both economic and psychological/social barriers to college attendance. Among the psychological/social barriers this study uncovered was an intimidation factor (Freeman 1997; 1999). African-American students did not have confidence in the academic preparation they received in high school and were uncertain as to whether they were adequately prepared for admission to college (Freeman 1997). These findings provide the impetus for further research on subjective norms related to college attendance. In an effort to gain greater insights into the aspiration development of diverse student populations, it may be important to examine: 1) how subjective norms are interpreted by students from different racial, ethnic, and socio-economic status groups and 2) the effect subjective norms may have on predisposition, college choice, and actual college attendance.

Considerations

The expanded model of college choice described in this article only presents a picture of the new model's potential for prediction of a student's predisposition for college attendance. A limitation of the Theory of Reasoned Action is that

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it operates under the assumption that behaviors are within volitional control of the individual (Ajzen and Fishbein 1980; Fishbein and Ajzen 1975) or student. In the latter phases of choice, students lose volitional control. The choice of what college they will attend will be determined by their grades, test scores, and the institutions that choose to admit them. Some students may lose volitional control earlier than the choice stage—the final stage of college choice—due to their lack of access to information, general resources, or poor grades during earlier stages of college choice such as predisposition and search. Once a student loses volitional control, the Theory of Reasoned Action is no longer applicable. It is not clear when students lose volitional control, but this is an important question that needs further empirical consideration.

Conclusion

College and university officials and policymakers exhibit an increasing interest in understanding the processes related to college choice behavior. At the same time, demographics of the college-age population are shifting. In order to be more effective in preparing for the educational needs of the country's citizenry, these officials are in need of information that will assist them in developing programs and marketing strategies that will appeal to a broader student demographic. Current models of college choice do not provide the proper framework for considering the college choice-related experiences of a broad spectrum of students.

The aspirations/achievement paradox experienced by African-American students is an example of the need for a more explanatory model of college choice for students of varying racial, ethnic, and socioeconomic statuses. Current models of college choice do not provide the level of detail on college choice-related behaviors to determine whether students from diverse groups have a true predisposition toward college attendance.

This article proposes a theory that broadens combined models to include a consumerist approach that moves beyond student characteristics to add a stronger focus on student behaviors related to college choice and its processes. General choice models, when integrated with the Theory of Reasoned Action, can provide a more comprehensive theory of college choice. The integrated model of college choice presented here seeks to increase opportunities for college attendance among students from a broader spectrum of racial/ethnic and socioeconomic backgrounds by expanding the underlying concept of college choice and to begin to take into account diverse experiences related to the college choice process by focusing on student behaviors.

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The Culture Wars Come to Campus—Again

 Travis Reindl

As primary contributors to the marketplace of ideas, colleges and universities have historically been the locus of contention for the worldviews of the left and right. Debate has become more heated in recent years, fueled by the war in Iraq and the renewed prominence of moral issues such as reproductive rights and same-sex marriage. In this environment, some conservative groups are crying foul on the nation's campuses, charging that pervasive liberalism in academe creates a hostile environment for free and fair exchange, particularly for right-leaning students. These interests have focused their attention and efforts on three primary fronts:

Academic Bill of Rights

This measure, promoted by activist David Horowitz through the Center for the Study of Popular Culture and Students for Academic Freedom, contains a handful of mandates. These include: non-discrimination with respect to viewpoint in the hiring, advancement, and dismissal of faculty; non-discrimination with respect to viewpoint against students in the assessment of their academic work; and acknowledgement of accepted and dissenting theories in the humanities and social sciences. The measure made its legislative debut in a few states in 2004, with limited success (a resolution in the Georgia Senate). In 2005, however, it appeared in more legislatures (thirteen) [see Figure 1], as well as in the U.S. House version of the reauthorization of the Higher Education Act (though modified to "sense of the House" language).

The prospects for the Academic Bill of Rights becoming law remain relatively modest, in part because evidence of viewpoint bias offered by interest groups often does not stand up to closer scrutiny. A key case in point arises from the University of Northern Colorado, where a student alleged that she failed an essay exam because she refused to write an essay on "why George Bush is a war criminal." Upon investiga-

tion, it was discovered that: a) the question did not directly state or imply that the president is a war criminal; b) the student was not required to answer the question in dispute; and c) the student failed the examination because she did not provide sufficient responses to the questions answered (*i.e.*, one page responses, where two page responses were requested).

Tenure and Faculty Free Speech Rights

Two prominent and contentious cases have pushed this issue to the forefront. The most recognizable is that of Ward Churchill, the University of Colorado professor who penned an article comparing September 11th victims to "little Eichmanns" (a reference to their implicit support of a corrupt system that gives rise to terrorism). The second comes from Columbia University, where professors in Middle Eastern Studies were accused of intimidating students with pro-Israel viewpoints.

Reaction to both was immediate and severe. In Colorado, the state's political leaders, including the governor, called for Churchill's ousting and threatened to reduce university funding in the amount of the professor's salary if he was not dismissed. The University defended Churchill's right to articulate his views as a scholar, but is investigating charges that he earned tenure on the basis of faulty or questionable scholarship. At Columbia, an internal examination found that no pattern of harassment existed, but did caution a professor about inflammatory statements. As a result, the University strengthened its grievance procedures for student complaints against faculty members.

These cases and others are engaging discussion and debate about protections of academic freedom and tenure, specifically, their extent and applicability. One state—Missouri—considered a bill that would have abolished tenure. Another (Colorado) debated a measure designed to protect faculty that reference religious or political viewpoints in the classroom.

Academic Bill of Rights State Legislation—2005

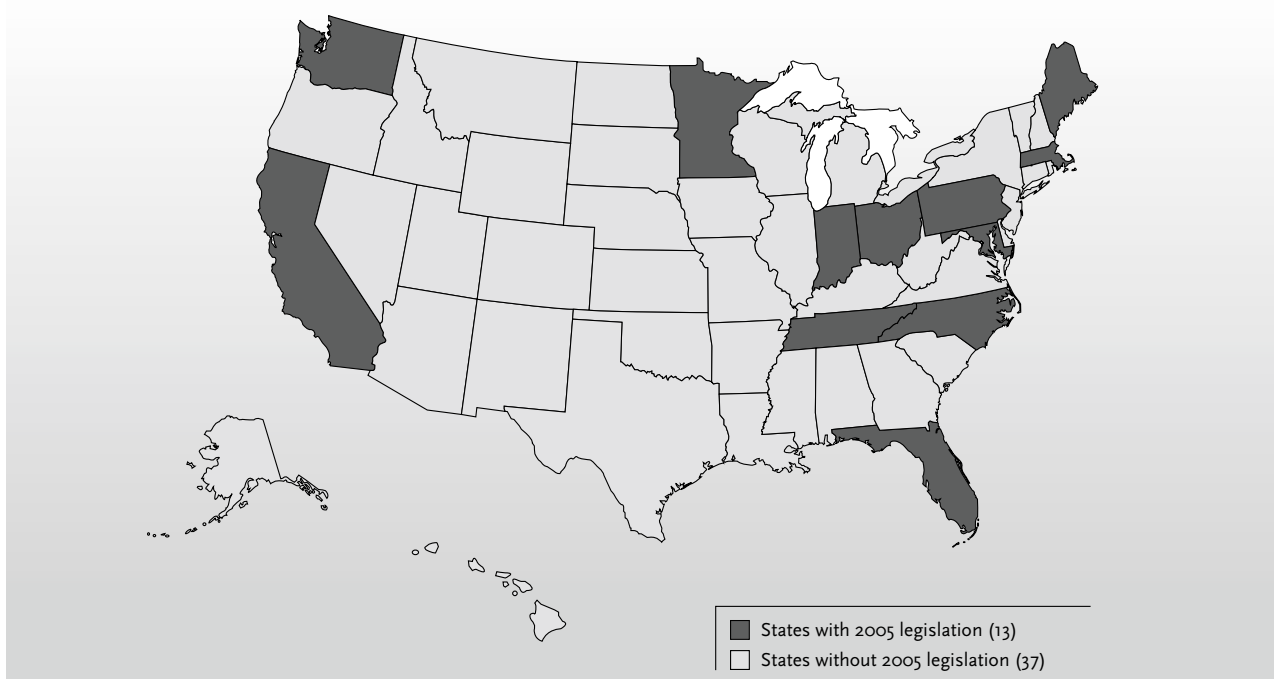


FIGURE 1: ACADEMIC BILL OF RIGHTS STATE LEGISLATION—2005

Both failed, but indicate that lawmakers are indeed paying attention to these issues.

Political Speech Outside the Classroom

The 2004 election cycle brought disputes involving controversial guest speakers that put higher education stakeholders at odds over when—or whether—partisan figures should be brought to campus using public and/or student funds. Institutions arrived at different conclusions, but share a common caution about the political landmines of “hot” speakers and topics during a campaign season.

Appearances by activist and filmmaker Michael Moore drew the most heated debate. California State University-San Marcos and George Mason University (Virginia) cancelled their Moore appearances, citing concerns over viewpoint balance. CSU’s cancellation brought the threat of a breach of contract suit, while GMU’s rescinded invitation was cited as a factor in the rejection of the University’s bid to establish a Phi Beta Kappa chapter. Campuses that went ahead with Moore visits also experienced a backlash. Utah Valley State University, which hosted Moore but brought in conservative

commentator Sean Hannity for balance, has experienced negative political and financial consequences, and is working to shore up its community relations as a result.

So where does that leave the state of dialogue and discourse on the nation’s campuses? Based on the developments cited above, the answer would clearly seem to be “a very tenuous place.” The potential for constructive outcomes from the latest skirmishes in the culture wars—renewed awareness and enforcement of free speech protections, for example—is significant. At the same time, however, the potential for abuse—misusing non-discrimination policies to purge controversial professors or mask poor student performance—also exists. Campus leaders and policymakers must take care to make colleges and universities safe places for difficult conversations, not safe places from them.

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The Colorado Voucher System: Implications for Higher Education

by Spiros Protopsaltis

This past fall, as part of a major higher education reform initiative, Colorado became the first state to implement a voucher system for funding higher education. The vouchers are the culmination of a reform effort initiated in the summer of 2001, when Governor Bill Owens created a blue ribbon panel to examine several issues, among them alternative funding structures and ways to increase college access. The panel was in part a reaction to well-publicized reports about Colorado's poor performance in providing a postsecondary opportunity for young adults—especially low-income and minority students—despite having a significant college-educated population. The problem of access, termed “The Colorado Paradox,” was coupled with the perceived need by Governor Owens and the appointed Colorado Commission on Higher Education (CCHÉ) for increased competition and efficiency, and a consumer-focused market-driven approach to higher education, which characterized the administration's policy initiatives since taking office in 1999.

While the idea of direct state appropriations to students instead of institutions had surfaced in the past, the panel's discussion marked the first time that vouchers were considered as a feasible and viable option, enjoying an advantageous political environment as well as other conditions that favored drastic changes. First, both the executive and legislative branches of state government were controlled by members of the Republican Party who supported the concept of vouchers, as well as the overall reform of public higher education. Second, public colleges and universities were calling for more autonomy and flexibility in response to what they viewed as increasing regulatory interference and academic controls imposed by CCHÉ. Third, during the second year of the panel's deliberations, public higher education suffered the beginning of the largest drop in state funding in the nation due to the economic downturn in combination with the effects of

Colorado's Taxpayers Bill of Rights (TABOR), a highly restrictive constitutional revenue and expenditure limit. TABOR also severely restricts the amount of non-tax “cash fund” revenues, such as tuition, and the result was that public colleges and universities were unable to raise tuition rates to the level that would make up for the sharp decline in state funding. This funding crisis contributed to an emerging sense of urgency among institutions, which sought to exempt tuition revenues from TABOR restrictions.

In addition to these contextual factors, the proponents of college vouchers skillfully framed the issue as a remedy for both the low rates of access and reduced funding. According to CCHÉ, a series of focus groups “market-tested” the voucher concept to students and parents who were asked essentially whether they would consider attending college if the state provided them with a savings account for college upon high school graduation. The underlying rationale was that by making the state subsidy to in-state students visible and making students aware of existing state funding, the subsidy would become a “tangible product” causing a behavioral response of increased access. As expected, the encouraging results from the focus groups served as evidence to the panel that students' likelihood of going to college would grow under a voucher funding system.

Finally, the vouchers were promoted as a tool to protect higher education from future budget cuts. Under the pressures of Medicaid, spending on corrections, and Colorado's constitutionally mandated annual increases for funding K-12 education, higher education has been the largest discretionary item in the state budget and, as in many states, becomes the primary target for budget cuts when revenues decline. According to proponents, the political costs of slashing the voucher would make more difficult, and even prevent, any future cuts from higher education.

The constellation of these factors led to the unanimous adoption of the panel's recommendations, which were released in January 2003. The House majority leader immediately introduced legislation to implement the panel's recommendations to:

- Establish \$4,000 college vouchers (\$133 per credit hour) for undergraduate students and \$8,000 (\$267 per credit) for graduate education, with a 140 credit hour cap for undergraduates and a 60 credit hour cap for graduate students;
- Continue the state's performance measurement system (Quality Indicator System), with retention and graduation benchmarks that, if met, would lead to tuition or other flexibility for institutions;
- Provide role and mission grants for specified high-cost programs; and
- Reduce community college tuition by 25 percent.

The revenues from vouchers and role and mission grants would equal the previous year's appropriations, thus holding institutional budgets harmless.

Most important, by appropriating funds for stipends to a trust fund for disbursement to institutions on behalf of students, many institutions would qualify to become enterprises and have their tuition revenues exempt from TABOR restrictions. Under the provisions of the Taxpayer's Bill of Rights, a government program may be designated an enterprise if it meets the following criteria:

- Receives less than 10 percent of annual revenue from state and local governments;
- Has authority to issue revenue bonds;
- Engages in activities commonly carried on for profit outside the public sector; and
- Is accounted for separately under financial records.

Despite the strong support of the governor, CCHE, and institutions, the bill was narrowly defeated by fiscal conservatives because of fears that it was another entitlement program that would limit the legislature's ability to make budget cuts in difficult times.

Unsure of the bill's fate, the University of Colorado, which already qualified for enterprise status due to the decline in its state support and its significant federal and private funding, had simultaneously introduced legislation. However, this "Enterprise" Bill—although passed by the legislature by a wide margin—was vetoed by the governor, signaling that he would not allow for greater institutional autonomy unless the panel's recommendations were adopted as well.

During the period leading to the 2004 legislative session, CCHE and public higher education officials worked to redesign the voucher legislation, which combined the basic tenets of the 2003 legislation with the enterprise status bill prepared by the University of Colorado. The redesigned legislation, Senate Bill 189, was introduced in January 2004 by the president of the Senate and the House majority leader, and was passed and signed by Governor Owens into law in May.

The Fall 2005 semester marked the first time that students applied directly to the state for their share of state higher education funding—the most radical and controversial element of this reform. The College Opportunity Fund, the state's newly created trust fund, paid \$80 per credit hour on behalf of undergraduate students attending Colorado's public higher education institutions and \$40 for low-income Colorado high school graduates attending the state's two largest nonprofit universities, the University of Denver and Regis University. This roughly adds up to vouchers in the amount of \$2,400 and \$1,200, respectively, per full-time student—a significant drop (due to the severe budget cuts) from the proposed voucher amounts in 2003. Furthermore, the vouchers will only finance undergraduate education; however, the credit cap increased slightly from 140 to 145 credit hours.

In addition to the voucher system, the legislation that enabled this sweeping change to the higher education system also included two additional elements of reform: performance and fee-for-service contracts. Institutions participating in the voucher system were required to enter into contracts with CCHE that specify performance measures in four areas: student access and success, quality, institutional efficiency, and addressing the state's needs, including teacher education, and workforce and economic development. The purpose of these contracts is to provide greater flexibility and less state regulatory oversight for public institutions in exchange for focused and tailored accountability, and to replace the previously used performance system.

CCHE also entered into fee-for-service contracts with public institutions to purchase specific educational services that are not covered by the vouchers, such as graduate education, rural education, dual enrollment, and various professional degree programs. These contracts, which replaced the role and mission grants included in the 2003 legislation, are consistent with an institution's performance contract and institutional mission, and combined with the voucher revenue, hold institutions' budgets harmless from the previous year.

Clearly the rhetoric during the 2004 session shifted from improving access to providing relief for higher education institutions through enterprise status. An innovative accounting scheme of funding higher education through vouchers and fee-for-service contracts, instead of appropriations to institutions based on enrollment and costs, transformed overnight all TABOR-limited tax fund revenues into TABOR-exempt revenues. As a result, all public colleges and universities would automatically become eligible for enterprise status and their tuition revenue would not have TABOR implications.

Many legislators, and especially Democrats, rejected the notion that the bill would impact access since there was not a single new dollar for higher education, the proposed voucher amount had been slashed, the decrease in the community college tuition had been dropped, and tuition was likely to increase significantly once exempt from TABOR restrictions. While a few Republican legislators and CCHE continued to tout the bill as a tool for increasing access, the legislation was

primarily viewed as the last chance for public higher education to avoid Draconian funding cuts and school closures. Institutions lobbied heavily in support of the bill, arguing that it was an issue of survival, swaying some skeptical legislators. The University of Colorado released a report at the beginning of the 2004 legislative session projecting that unless action is taken, within a decade Colorado would become the first state in the nation not to fund higher education.

Furthermore, enterprise status would also facilitate academic and administrative flexibility that institutions had been calling for, as well as construction projects. Deregulation was considered an important element of reform and was a major objective of the president of the Senate and several legislators, especially Democrats. With the strong support of CCHE, the governor, senior legislators, and public institutions, the bill was ultimately adopted.

Senate Bill 189—Challenges and Questions

Despite its broad support from both CCHE and public higher education institutions, the implementation of Senate Bill 189 has faced several challenges and has raised important questions about its intended and unintended consequences.

First, students' out-of-pocket costs have increased significantly since the legislation was enacted. Students are asked to pay the full tuition price and then the voucher amount is subtracted from their balance. The difference is the in-state tuition rate that resident students have always paid. However, due to the enterprise status, tuition has soared. Immediately following the end of the 2004 legislative session, the University of Colorado became an enterprise, since it was the only institution that qualified regardless of the new funding system of vouchers and fee-for-service contracts. While the rest of the institutions were forced to limit their tuition increases to the rate of inflation, which was 1.1 percent, the University raised tuition 9 percent for most undergraduates and 12 percent for most graduate students, although some programs rose tuition up to 65 percent. This past summer, the "tuition war" between the governor and the University of Colorado heated up again and dominated the newspaper headlines. The University's plan to increase tuition by an average of 28 percent infuriated the governor and CCHE, and ended with a compromise that includes rebates to undergraduate students to limit their increases to between 15 and 20 percent. The governor and CCHE demanded increases of no more than 11 percent and threatened the University with budget cuts. In the meantime, Colorado State University, which along with all other public colleges and universities became an enterprise this past summer, increased tuition by 15 percent. While enterprise status allows for tuition flexibility, tuition-setting authority is retained by the governor and the legislature, and thus, controversy over tuition is likely to persist.

Second, the performance contracts, which are much more limited for the private institutions, do not provide the flexibility that public institutions had hoped for. Under the goal of efficiency, tuition increases are limited to a mandatory cost

model that calculates inflation for costs such as insurance and utilities. All tuition increases above this figure must be justified to CCHE in terms of improving quality or access. In addition, the contracts require a variety of performance standards for retention, graduation, faculty, academics, students, a common core curriculum, as well as the efficiency of operations. In other words, the hope of tuition and administrative flexibility has been dampened by a strong regulatory performance schema. Public college officials have argued that it is unfair for public institutions to be regulated by the state and then to have the state give money to unregulated private schools.

It is also important to note that the sections on improving access and success for underserved students in the contracts, which was heralded as the impetus for the higher education reform, define underserved as low-income, minority, or male students, and do not contain any specific performance measures—such as Pell Grant recipients—as a share of undergraduate students. In other words, a White male student from a family with \$1 million in annual income is considered an underserved student in the performance contracts, raising questions about their effectiveness in holding institutions accountable for improving access and success for low-income and minority students.

Third, the Colorado Christian University, which is a Protestant institution, has filed a federal lawsuit against CCHE claiming bias because it was refused participation in the voucher program. CCHE refused participation because the legislation specified that eligible institutions should "not be pervasively sectarian." But Denver-based Regis University, a Catholic institution, participates in the program and has signed a performance contract. The U.S. Department of Justice has filed a friend of the court brief in support of Colorado Christian University, contending that the principle of nondiscrimination on the basis of religion was more important than Colorado's interest in seeking a greater separation between church and state, and the executive director of CCHE Rick O'Donnell called for the legislature to allow the school to become eligible for vouchers. Also, although Colorado College was eligible and had indicated it would participate in the voucher system, it was unable to work out a contract with CCHE and did not receive vouchers this past fall.

Fourth, while it is early to estimate the success of vouchers in increasing college access, it is questionable whether the system can afford to be successful. If thousands of more students do decide to go to college because of their awareness of the state subsidy, how will the state fund their vouchers, in the midst of a dramatic budget crisis? Indeed, the legislation allows for the voucher amount to be decreased during the academic year, but institutions are not allowed to increase tuition. In essence, if the voucher program proves to be successful and college access improves, students will see their vouchers slashed and institutions will have to educate more students with less funding. Although it is early to measure any impacts of vouchers on enrollment, initial evidence does not indicate an increase in undergraduate enrollment; instead,

there might have been a slight decline in enrollment this past year. According to CCHE, as of early September 2005, 97 percent of eligible students had received the stipend, so the implementation of the vouchers seems to have successfully captured most continuing or new in-state students. However, total in-state enrollment in the next few years, and especially enrollment of underserved students, will serve as the true measure of the vouchers' effectiveness.

Fifth, the costs of implementation have been significant. While legislative staff estimated the administrative costs of implementation at \$1.1 million in the first two years, institutions have spent considerable resources in educating staff, students, and parents about the new funding system, assisting students with voucher applications, upgrading software, and other costs that will surely surpass the estimated figure. Also, in January 2005, CCHE launched a five-year, \$15 million marketing campaign to advertise the college vouchers and provide students and parents with information about college, such as admissions requirements and financial aid. At a time of shrinking state funding for higher education, one more slice has been carved out for implementation.

It remains to be seen whether vouchers and performance and fee-for-service contracts will succeed in increasing college access, improving college success, making public institutions more effective and efficient, keeping tuition low, enhancing accountability, and reversing Colorado's poor record in investing and supporting higher education. Amid the uncertainty of the short- and long-term effects of this reform initiative, advocates of public higher education in Colorado took a big sigh of relief this past November when

voters narrowly approved Referendum C. If it had failed, Colorado would have become the first state to gradually eliminate state funding for higher education and the voucher would eventually be worth \$0. Referendum C allows the state to keep an estimated \$4 billion in revenue over five years that otherwise would be returned to taxpayers as TABOR refunds. In his budget request, Governor Owens asked for the voucher to go up to \$2,580, from \$2,400, limit tuition increases to 2.5 percent annually, and restore 40 percent of the budget cuts that higher education has suffered since 2001.

At the same time, the administration is planning its next step in market-driven higher education reform. CCHE is currently considering proposals to create a financial aid voucher system that would centralize and outsource to a private company the process of determining students' financial aid awards, which is currently taking place on campuses. The state would guarantee eligible students a minimum award that could be used at an institution of their choice. However, college financial aid officials believe that the problem lies in the lack of adequate state funding for financial aid and not in the distribution method—a recurring theme within the world of higher education in Colorado.

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Getting Serious About Student Success: High School-College Alignment

by Travis Reindl

The efficiency and effectiveness of the nation's human capital pipeline has become a prime area of focus in the policy arena, spurred on by international data that show the U.S. lagging in high school and college completion. For policymakers, education leaders, and even students and parents, it is becoming increasingly clear that the transition between secondary and postsecondary education remains a "dead zone," a place where confusion reigns and dreams die. The high school-college handoff leaves too many students underprepared—or even unprepared—for what's next, which in turn leads to remediation and attrition. Sealing the cracks in our educational pipeline and thus boosting student success rates means addressing a combination of financial, social, and academic factors. Of these, it is the academic dimension, specifically, the alignment of curricula and standards, that is at once the most intractable and ripest for change.

While efforts to smooth secondary-postsecondary transitions have been underway for the better part of the last two decades, a wealth of current data shows that much work remains:

- According to the American Diploma Project, only about one-third of American high school students graduate with the basic skills needed for college or the workplace (lower for African American and Hispanic students).
- A survey conducted for the National Governors Association (NGA) found that 29 percent of high school students surveyed termed the senior year a "complete waste of time," while nearly half (49 percent) indicated that the senior year is somewhat useful but could be made a lot more meaningful.
- States are ratcheting up course requirements and are developing exit standards, but these do not adequately reflect the tools needed for success, particularly in trouble spots such as mathematics.

So what must be done to keep the United States competitive in the race to develop and employ human capital? Policy initiatives in the area of alignment should focus on three simple observations:

- *Students are not taking enough of the right courses to succeed in college.* Research by the National Association of System Heads (NASH) reveals the breakdown between high schools and colleges regarding the number and content of courses on the college prep track. In English, just over half the states (28) are aligned on the number of courses required, but only four are fully aligned on course topics. The situation in mathematics is even worse—only ten states are aligned on the number of courses required, and only one is fully aligned on content. Such a situation is simply unacceptable, particularly since there is solid research showing the essential coursework for college persistence and completion.
- *Student assessments are poorly timed and are not rigorous enough.* On the positive side, the K-12 standards movement has brought the development of high school exit exams (in half the states within the next five years), which have significant potential to gauge college readiness. That potential, however, remains largely untapped. A content analysis of exit exams by Achieve, Inc. found that, generally speaking, the exams are too focused on the front end of the high school experience (*i.e.*, 10th grade or below), measure only part of required knowledge or skills (college or workforce), and have cut scores that are too low. It is time to raise standards on existing exit assessments, and to ensure that states developing exams insist on sufficient rigor. Moreover, exit assessments should be developed in close consultation with two- and four-year postsecondary providers to ensure that deficiencies in preparation are identified before students arrive on campus.

In response to this call, some raise the concern that raising standards will also raise dropout levels. Such concern, while legitimate, should not be allowed to stand in the way of increasing expectations. First, current research is inconclusive as to whether this is the case. Second, programs targeted to students most at risk for dropping out can and should be developed, rather than holding back the broader population of students.

■ *Postsecondary options for high school students are underused.* Accelerated programs such as Advanced Placement (AP) and International Baccalaureate (IB) have been with us for a generation, but too few students are able to take advantage of them, particularly in low-income urban and rural school districts. According to the NGA survey, fully one-third (34 percent) of the students not taking AP and/or college prep courses did not do so because they believed (or were told) that those options were available only to the best students. Similarly, dual/concurrent enrollment options for high school students are available in virtually every state, and eighteen states mandate that schools make these options available to students. Like AP and IB, however, their availability to students statewide, particularly in historically disadvantaged districts, is limited.

Moreover, the NGA survey indicates that students want more access to these programs, as nearly three-quarters (71 percent) of students believe that taking high school courses that count for college credit would make the senior year more meaningful.

In his book *Fast Company*, author Seth Godin succinctly articulates the competitive battlefield for the United States in the 21st Century, stating that the nation's first century was about agriculture, its second was about industry, and its third will be about ideas. To prosper in its third century, the nation will have to produce more and better educated citizens than ever before. Failing to seal these cracks in the educational pipeline—including alignment—will greatly hamper, if not cripple, our ability to do just that.

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Note: The author gratefully acknowledges the assistance of Dr. Alene Russell, AACSC State Policy Scholar in assembling this analysis.



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AMERICAN ASSOCIATION OF COLLEGIATE REGISTRARS AND ADMISSIONS OFFICERS



The Impact of the Revamped SAT on Admissions Policies Among Western Land Grant Institutions

by Melisa N. Choroszy and Jessica Muehlberg

The newly revamped Scholastic Aptitude Test (SAT) was administered for the first time in March 2005. Students anxiously sat for these exams wondering how this new test—three parts comprised of Critical Reading, Writing, and Mathematical Reasoning—would compare to the usual two tests of Verbal and Math. What was this new score of 2400 and what would it mean for them in terms of admissions, scholarships, and course placement?

At the same time that students were asking these questions, so were administrators, faculty, and staff in colleges and universities throughout the country. All were very nervous about the storage of score values and the ability of their student databases to accept these new scores. There were concerns about possible changes in business practices and how those changes might affect enrollment. Most admissions officers and registrars had based their entire SAT schema on a maximum score of 1600. A new maximum score of 2400 held implications for a volatile culture shift for these professionals. As a result of this concern, the Western land grant colleges and universities were surveyed to determine the impact of the new SAT.

In the summer of 2005, the University of Nevada, Reno surveyed eleven land grant universities in the West: Colorado State, Montana State, Oregon State, University of Alaska-Fairbanks, University of Arizona, University of Hawaii-Manoa, University of Idaho, University of Wyoming, Utah State University, University of Nevada, Reno, and Washington State University. The following three questions were posed:

- Does your institution utilize ACT/SAT scores in admissions and/or course placement decisions?
- Please describe how the new SAT has affected your admissions and/or placement procedures.
- Is your institution using the new SAT Writing Placement Test for placement in freshman English courses?

Question 1: Does your institution utilize ACT/SAT scores in admissions and/or course placement decisions?

All of the institutions surveyed accepted both the ACT and SAT test scores. While Washington State reported the SAT as the majority of the test scores it received, North Dakota reported that 97 percent of the test scores it received were ACT. Nevada observed that prior to 1990, ACT had been the most frequently reported score. However, today's students were observed to take both tests and report both scores to the Nevada universities.

Question 2: Please describe how the new SAT has affected your admissions and/or placement procedures.

Despite much apprehension, the vast majority of institutions responding to this survey reported that there had been no change in their current admission policies and procedures as a result of the new SAT. All institutions reported fielding a number of questions from confused parents and students. Quoting one university, "The new SAT has not affected our procedures except to say that we are asked more questions about the impact it will have on our admissions process. Students seem confused and have a tendency to include the writing portion to their math and verbal in calculating their admissibility index." Consistent with this response, if test scores were a requirement for admission, most universities continued to use only the reading and mathematics portion of the test in their admissions decision.

None of the institutions reported that they had changed their admissions processes or procedures as a result of the new SAT. Three institutions reported that they had planned to track students with the new SAT for possible alterations in admissions requirements in the future.

Question 3: Is your institution using the new SAT Writing Placement Test for placement in freshman English courses?

Some institutions reported that they were using the new writing portion of the SAT for placement into freshman English courses. Given the fact that this was the first test administration of the new SAT and that many students had already taken the older version early in the year, the impact on students and institutions was minimal. Most institutions have adopted a “wait and see” approach, using the reading and mathematics portions of the test in much the same way as they had always used them, despite a change in test content. This may have been the most sensible approach given that most of the new freshman class would have taken the

old SAT. Adopting two sets of policies for the same incoming class might have resulted in needless confusion.

A follow-up of this research will be conducted in 2006 to assess the impact of the new SAT in both admissions and English placement.

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Ethical Behavior for Today's Workplace

by Janet V. Danley

In these troubled times rife with examples of corporate, institutional, and personal misbehavior, it is sometimes difficult for us to determine just what is an ethical response. With headlines disclosing college and university recruiting violations in athletics, researchers intentionally publishing erroneous or misleading results, presidents and other officers being accused of sexual harassment or misusing funds, it is little wonder that we are sometimes confused on how best to perform our duties and responsibilities. However, despite all that we see occurring around us, we can and should live our personal and professional lives in a manner that models high ethical standards.

What are the “rules” in this challenging environment? Whether our role is president of the institution or as a worker in an office that serves students, we are responsible for our own behavior as well as setting standards that inspire others to behave ethically. We must be consistent in our responses to everyday events, dilemmas, and challenges, and base our actions on the standard of ethics that we have developed.

So what are those ethical standards? Of course much has been written about ethical behavior and standards. Aristotle had much to offer us regarding the virtues of an ethical person and he considered bravery, truthfulness, justice and generosity to be the greatest attributes a person could observe and internalize (Irwin 1985). A more modern perspective is offered by Stephen R. Covey (1989). His book, *The Seven Habits of Highly Effective People*, cites courage, honesty, fairness, and empathy as being traits necessary for ethical behavior. And former New York City Mayor Rudolph W. Giuliani gives us his thoughts on what characteristics set great ethical leaders apart from others in his book *Leadership* (2002). The American College Personnel Association (ACPA) as well as the American Association of Collegiate Registrars and Admissions Officers (AACRAO) give us codes of ethics to

guide our behavior in our everyday professional work. Individuals also apply the standards of ethics that they have acquired through their faith and personal belief system.

This article will briefly discuss standards of ethics in the context of situations we frequently encounter during our daily interactions with students and co-workers. Brief “real life” sketches will provide context for discussion. While by no means meant to be a definitive or all-inclusive review of any particular code of ethics, this article will strive to give the reader some thought-provoking examples and concepts to consider applying in the execution of his or her duties and responsibilities.

Creating Habits of Excellence

Habits of excellence involve knowing—almost by instinct—how and when to take action. For example, during his administration, Mayor Rudy Giuliani stated that he prepared for a crisis by imagining the absolute worst scenario possible and then documenting the steps and actions that would be necessary to deal with the situation. As a consequence, when the events of September 11, 2001 unfolded, Giuliani and his team already had in place plans that could be implemented quickly. As a result, Giuliani and his team were able to lead and communicate with the people of New York almost immediately, and most likely prevented mass panic (Giuliani 2002). In responding to crises or problems, our first reactions are typically the ones we have practiced. If we react in a manner that is ethical and honorable, most likely it is because we have internalized a strong ethical system of standards and behaviors.

In the same way, developing habits based on courage, integrity, fairness, and generosity prepare the leader for ethical responses to moral dilemmas and situations that require immediate action. So, how do these traits apply to our every day life at home and at work?

Courage

We all have different interpretations of courage. Is it being fearless when confronted with danger? Is it acting with bravery if the going gets rough? In our professional lives, courage is demonstrated when difficult decisions must be made and communicated to employees or others, such as our students. Courage is taking a stand and speaking out on issues that are controversial or sensitive, even when the majority is willing to “let it pass.” It takes great courage to tell the truth, especially when there is no one who wants to hear the truth or who is willing to back you up when you speak the truth. It also takes courage to protect the underdog, the underrepresented, or the most vulnerable in our community. And, perhaps the most difficult, is to have the courage to reveal our own fears and concerns when a “stiff upper lip” would be easier.

We all know courageous individuals and perhaps wonder if we could display as much courage in the face of adversity. Giuliani (2002), as have many others, suggests that great leaders display courage. He goes on to say that strong beliefs are critical components for great courage. Courageous people are able to create—for themselves and others—a vision of the future, and can thus act in a manner to bring that vision to reality. Further, when acting on their vision, courageous people are acting on their belief system. The ACPA code of ethics exhorts student affairs professionals to adopt a professional lifestyle that is based on sound theoretical principles and a personal belief system that exemplifies the best practices of the profession (ACPA 1999). A strong personal belief system can sustain us in a time of difficulty and stress when we know that the action needed is not going to be easy or popular. As a professional in higher education, we have encountered situations that are not pleasant or easy.

For example, a director of admissions holding out against the repeated requests to “bend the rules” so that the granddaughter of one of the college’s most significant donors could be admitted, even though she does not have the academic qualifications, will very likely not win her friends in the foundation office. Yet, the director knows that to admit the student would diminish the accomplishments of the students who were admitted on their academic qualifications. The director is not looking forward to her next encounter with the vice president of the foundation. While this situation certainly suggested that the individual involved acted courageously, it also required that she act with honesty and integrity.

Honesty and Integrity

An African proverb tells us, “One falsehood spoils a thousand truths.” And because honesty is the basis of integrity, it is imperative that we be truthful in our day-to-day conduct. Certainly, our trustworthiness as well as our integrity is measured by the honesty, or the lack thereof, that we demonstrate each and every day.

For instance, while preparing her annual report of institutional aid awarded to students of color, the financial aid director realizes that the numbers of students choosing to not

report their racial identity has increased significantly over previous years’ numbers. Although troubled by the increase in the numbers of students who did not report their ethnicity or race, the director knows the president will be unhappy if the report shows a decline in the numbers of students of color being served by the financial aid office. The director pulls out the previous year’s report and considers revising the current percentages to more closely align with last year’s, thinking all the while that the numbers of students not reporting is surely a data entry error that can be easily fixed when there is more time. However, after giving the matter more thought, the director prepares the report with the current lower numbers but attaches a note that suggests research is needed to determine why students are reluctant to report their ethnicity and race.

Think of the people you value for their integrity. What are some traits that you notice in these individuals? Do you consider them to be loyal? Committed to their institutions, their staff, and their beliefs? Is their management style effective in developing staff to their fullest potential without taking personal credit for the work of their staff? Are they trusted by their staff and colleagues? The foundation of all of these wonderful traits is, most likely, an unquestioned honesty that everyone around them recognizes and acknowledges. These are the kinds of people we generally want on our team because we know they can be counted on for their integrity.

The situation described above is relatively common and yet how the individual resolves the problem reflects not only his or her own code of ethics, but also the norm for behavior at the respective institution. The institutional culture frequently determines how people are treated and whether or not policy and practice are applied equally to all, but the ethical leader will work to ensure that everyone is treated fairly.

Fairness

Perhaps one characteristic that people recognize most quickly in an ethical leader is fairness. The leader who displays fairness in his or her interactions with others usually listens to others with empathy, recognizing the worth and value of the speaker’s concerns, opinions, or questions. They display courtesy, trust, and respect for all whom they encounter. And yet we know them to be firm and principled in their dealings with others. They are not gullible or easily swayed from their ethical center. Being consistent is an important aspect of being fair, especially in the treatment of others. The ethical leader always carefully considers whether the solution can be applied universally.

An example of fairness is an enrollment management team assessing the current criteria for admission and scholarship eligibility. Knowing that research shows that low-income students and families are disproportionately underrepresented when financial means tests are not included in the criteria used to evaluate students for admission and/or scholarship, the team works toward establishing policies and processes that will include socioeconomic factors in the evaluation criteria. The team is pleased that the new policies

are designed with the intent of awarding all deserving students, including those from low-income families.

Universality is fundamental to most educators. The ACPA code of ethics asks student affairs professionals to be committed to assuring that all individuals be treated fairly and equitably, regardless of our position in the university. To be able to treat all in an equitable manner requires an appreciation for the differences that are found in individuals and groups of people. An ethical leader will promote tolerance and understanding rather than encourage bigotry and intolerance.

One of the outcomes of decision-making is whether the result was fair to all. Giuliani (2002) says that decision-making that would make everyone happy would be easy if there were always choices that benefited everyone. However, the choices we are given and the decisions we must make often benefit one individual or group over another. It is up to the decisionmaker to provide an explanation for the choice he or she has made—not for the purpose of convincing those impacted by the decision that the decision was the perfect solution, but that the decision was the fairest solution possible based on the facts. A leader known for his or her equitable treatment of others will be able to face even the most vocal of opponents. Yet, acting in a fair manner but without generosity can lead to a sterile environment.

Generosity

Generosity encompasses much more than our material possessions; the ethical leader works to find ways to be generous with his or her time, knowledge and skill, and positive attitude. It is this type of generosity that is the hallmark of a principled individual.

A year ago, the vice president for enrollment management was asked by the president to diversify the staff as vacancies occurred. The vp knew that several positions would become vacant over the year and had been encouraging several of the current staff to prepare for these higher level positions. He had hoped to fill the vacancies with the current staff, which would allow him to promote committed and loyal employees into the positions. However, the vp also recognized the benefits of increasing staff diversity. The vp spent the year conducting workshops and seminars on diversity and working with the staff to help them realize for themselves the need to more broadly diversify the staff. When the anticipated vacancies occurred, the vp advertised the positions in journals and newspapers read by professionals of color.

In our busy lives it is easy to hide behind voicemail or e-mail or even our work; to put off people and their problems; to avoid making the decisions that need to be made and communicated to others; or to avoid even thinking about the direction in which our own personal and professional lives are heading. However, it is in exactly these hurried times that it is most important to give the time, attention, and effort to our support staff, to our friends and colleagues, and yes, to ourselves. We cannot be models of ethical leadership until we have taken the time to prepare and develop our internal stan-

dards and then apply those standards to the situations that require us to be at our best.

Concluding Thoughts

While there is no way we can anticipate all of the different types of situations and dilemmas we will face as educators and professionals, we can prepare ourselves by internalizing high standards and developing habits of behavior that will ensure that we react and respond in a manner that observes the tenets of ethical leadership. Each day we are called on to make decisions and are presented with situations that require us to take action. We know every decision and reaction leads not only to short-term results but may have much longer-term implications. This should give us reason to pause to consider whether or not our decision can be applied to other similar situations in the future. Developing the habit of future thinking can provide us with a perspective that not only prevents shortsighted impulsive and reactionary behavior, but gives us an opportunity to develop a sense of consistency and continuity in our leadership.

The brief examples of everyday situations given to illustrate integrity, courage, fairness, and generosity are by no means inclusive of the many types of ethical conflicts that we encounter in performing our jobs, nor are these examples particularly complex, but will hopefully provide a starting point for the important work of looking within ourselves to determine where our belief systems and personal code of ethics may need strengthening. The important thing is to take the time to examine, prepare, and practice a strong code of ethics—by creating habits of excellence for ourselves and our colleagues and constituents. Our staff and our students deserve only the best from us—it is our job to prepare for that responsibility.

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Degree Audit Systems: Are They Worth It?

by Virginia Johns

We have heard about the various degree audit products available on the market—the functionality that they each provide, the technical platforms upon which they operate, their requirements for interfacing with the local SIS, the ease of use, and the level of effort required to implement and operate. However, the seemingly simple question to ask is: “Are they worth it?”

I posed this question to various electronic lists used by registrar professionals. The survey included five open-ended questions eliciting information about: results, measures, worth, environment, and advice. I received many requests for the results of the survey (“keep us posted, we are currently involved in implementation and are asking ourselves this very question”), about a dozen responses from those that had recently implemented a degree audit system (“too early to tell”), and 25 substantive responses summarized in this article. These 25 responses were from a range of institution types (community college, research university, public, private) and sizes (1,500 students to 58,000 students).

For those of you who can’t stand suspense—the unanimous opinion was *yes*, degree audit systems are worth it.

Results: Value Provided

Common criteria used to judge success of a system implementation include completing the project on time and finishing it within budget. Indicators that more closely address the value aspect include:

- Is it being used?
- Has it enabled efficiencies?
- Has it improved service?

All respondents reported that the system was being used on their campus. Usage appears heavier on those campuses

that provide student self-service audits and a “what-if” capability via the Web. Steady or increasing usage is the norm; no one reported that usage dropped off, for example, after the initial novelty period. One campus described it as “being used rabidly.”

Respondents consistently noted efficiencies. They commented on how it streamlined advisement, making it more efficient and effective. It improved a tedious manual process. It catches items that are sometimes missed in a manual process and enables advisors to answer “what-if” questions more practically and definitively. By providing online access to audits for all students, they are not restricted to seeing one advisor (a practical concern in the paper process for some). Advising backlogs are minimized through use of student self-audits for basic progress information. Decreases were noted in phone call and e-mail traffic. Advising time is devoted less to bookkeeping and more to advising about options. Significant decreases were realized in the time required to provide final degree certifications. It has allowed campuses to maintain and in some cases improve their level of service despite staff reductions in tough budget times.

Improved service for students was a common result, especially on those campuses that provided the Web self-service component. It allows for the 24x7 type of service that today’s students expect. It enables students to routinely and closely monitor their own academic progress. Students are provided consistent, accurate information. It has cut down on the “surprise” factor on graduation audits, relieving stress for students. It enables more proactive advising—identifying students in academic difficulty, those who are off-track, or students taking excess units beyond those required for the degree. It is a valuable tool for students as they register for their next term.

Measures: Quantitative and Qualitative

No one reported cost savings; several pointedly warned not to expect such savings. While you may save on paper, postage, and similar costs associated with paper processes, you need to invest in technology to provide this improved service. Labor savings (opportunity costs) were mentioned by many. Staff time is reallocated to more “productive,” “higher-level” work. Other quantitative measures observed by some campuses were improved graduation rates, improved freshman retention, a decrease in the number of “excess” units, and more timely course offerings.

Improved service and increased job satisfaction were the primary qualitative measures reported. Increase in accuracy, timeliness of information, and ready access to information contribute to the improved service. One campus provided a vivid example: “The number of students told that they did not graduate *after* leaving campus is lower. This has gone from a serious problem to a non-issue.” Enabling students to come better prepared to advising sessions with lower levels of anxiety, and decreasing manual processes contributed to the increased feeling of job satisfaction.

Worth: Value vs. Investments

This question elicited the most forceful responses. They don’t understand how they could have lived without a degree audit system. However, these exclamations were prefaced with warnings about how complicated it is, how much care must be exercised, how long it will take.

Besides the values noted above, which were expected outcomes, campuses reported that the process of developing the system provided secondary values. It uncovered mechanisms that tend to slow down the process and reduce clarity for the students (*e.g.*, extensive course substitutions not included in the published degree requirements). It forced a clearer presentation and interpretation of policies and helped to better educate both advisors and students about degree policies. It identified complex policies where inconsistent advising had been practiced in the past (*e.g.*, academic residency and minimum GPA). It raised awareness of the amount of change that occurs each year with degree programs. The program/curriculum development process improved as a result of this increased awareness.

Campus Environment: Factors Affecting Value

Level of authority and control was noted as a significant factor. Campuses with decentralized control, such as autonomous colleges with differing sets of requirements and dispersed responsibility for academic progress evaluations and degree certifications, reported that their success depended on significant collaboration among the various authority groups. This was a hindrance of sort, as it resulted in longer timelines. However, these same campuses commented that

good relations at the start were enhanced and improved during the process. Campuses where the responsibility for advising and degree certification were housed in a single area (generally smaller campuses) reported that their scope of control was a facilitator.

Adequate human resource levels was emphasized by most—both technical labor with appropriate skills, as well as advisor and admissions/registrar staff labor for requirements specification and testing. If you have them, it’s great; if you don’t, keep asking.

Unwritten requirements discovered during the process slowed down many projects; however, as noted above, most considered this a side benefit as well.

The volume of exceptions/petitions was noted as a hindrance. Respondents stressed the importance of a two-prong approach: 1) provide a mechanism for incorporating these into the audit (as it is imperative to provide the complete picture to gain the desired value), and 2) review petitions for recurring patterns and strongly advocate to incorporate these into the standard approved requirements.

Words of Wisdom: Advice from Respondents

- Ensure that users review and document requirements for a degree before handing it over to the programmers. Give them time to uncover the hidden requirements, sort out inconsistent interpretations, examine exception patterns, and resolve these matters with revisions to degree programs and academic policies.
- Establish/maintain a good working relationship among academic departments, colleges, and the admissions and registrar’s offices.
- Either start with a department or major, and program for them extensively, or start programming for everyone, but program broadly (total credits and GPA, then add in GE requirements, then add major requirements, then add electives).
- Lobby for adequate human resources.
- Get support from higher levels of campus administration.
- Recognize its complexity and that it is going to take time.
- Remember that others have gone before you and found that it is worth it!

ABOUT THE AUTHOR

Virginia (Ginny) Johns is the Acting Registrar at the University of California Santa Barbara. She has been an Associate Registrar at that campus for ten years. Prior to that, she was in the Department of Information Systems and Computing for fifteen years. She is active in both PACRAO and AACRAO as a speaker, facilitator, committee member, and committee chair.

Note: The author wishes to thank the respondents from regist-I as well as the PACRAO and AAU electronic lists.

Building the Future Registrar's Office

by Graham J. Tracey

Today's students—traditional and nontraditional—are more wired (or should I say wireless) than ever before. With computers and wireless devices becoming more affordable and universal, they expect, and even demand, to securely manage their educational experience online—from registering and paying for courses to receiving advice—all the time, from anywhere. You may have already witnessed the beginning of a new way of thinking at your institution to accommodate the needs of your students. The days of pink, green, and canary yellow forms, signed in triplicate, and handed into the registrar's office are rapidly disappearing. Students' everyday lives revolve around technology, so they expect their institution to be technologically advanced. State-of-the-art technology has become the rule—not the exception.

How hard could it be to transform your registrar's office into a new techno-hub of online self-services? Unfortunately, it is not easy. This change requires more than securing the right software to offer students online registration or wireless connectivity; it involves rethinking time-honored processes and streamlining your office procedures. It's centering your thoughts on your constituents, and then offering the services they need for the best educational experiences. Registrars should naturally lead the charge.

Students identify the registrar's office as the center of their educational experiences. You help them register, review financial aid, process payments, obtain transcripts, and so much more. Therefore it only makes sense this center of their educational experience is also the most technologically savvy. Your office can pioneer improved technological advancements, streamlined processes, and better user experiences across your campus. Unfortunately, there is no magic step-by-step guide to upgrading your office to best meet the needs of your constituents. Every institution is different, and therefore each solution is unique. However, the following guide-

lines can help you successfully transition to the best registrar's office for you, your staff, and your constituents.

The Office of the Future

STEP 1: BRING IT TOGETHER

The first step toward changing your office into the office of the future is to establish a data baseline to help develop your goals. Useful data to support your charge include constituents' satisfaction, soft and hard costs of office services, increased retention, and possible barriers. This information can be garnered from the following sources.

Conduct Surveys

Start simple by conducting surveys in your office. Ask quick questions that identify students and faculty self-service user patterns. Do they purchase products online? Do they use PDAs, mobile phones, computers? Review your customer satisfaction survey and possibly modify the questions to stress current, daily tasks such as submitting grades, paying for courses, and dropping/adding courses. Your questions should be specific and quantifiable. The results will help you support any necessary changes that you will need to make.

Map Processes

You also need to review your processes—for example, registration—and how they affect your constituents. Is it truly necessary for a faculty member to meet with the student prior to registration? Why? What benefit does it offer? What policy does it fulfill? Could it possibly be a policy that is no longer needed? Could it be handled online in a slightly different format to meet the needs of the process? Scrutinize every process. Why do you have that requirement? Is it still necessary? Can it be changed?

Count the Pennies

Quantify the cost of certain processes. What is the cost of mailing a course catalog twice a year? How much postage, printing, and labor is associated with this task? What are some soft costs linked to processes in your office? If the information is readily available, collect the costs of tasks in other departments as well. I'm not proposing that changing a process in the registrar's office is going to save the institution millions of dollars, but it can cut costs in unexpected ways and places.

Identify the Challenges

The final data point you should collect prior to setting your transition goals is a list of possible challenges to this change. Who might have concerns with changes to how the institution interacts with students, faculty, alumni, and so on? The IT department, for example, will be apprehensive about security issues. They might not have the right resources or training to update the technologies. Faculty members might also have concerns changing time-honored processes.

Students could also be a barrier. Not all your students share the same demographics. For example, older students might require more personal interaction with people in the registrar's office, while younger students might find it exhilarating to manage their entire education online.

Other challenges to think about are training and the costs associated with any change. You will need to educate everyone impacted by the new processes and technologies, which could be time consuming. And remember that new software and hardware cost money.

You now have an extensive arsenal from which to draw as you prepare your goals and objectives. You know more about how your constituents think and behave, you have scrutinized processes and procedures, you know how your money is spent, and you know what and who could challenge you from making the transition to the registrar's office of the future.

STEP 2: THE GOAL IS CHANGE

What will your office look like in the future? Will it be completely automated, providing self-service tools? What advanced technologies will it offer? Will it revolve around the needs of your constituents? Focus your goals and objectives on improved customer satisfaction, cost savings, and even intangible outcomes. For example, an intangible goal would be faculty members spending more time advising students, and less time managing administrative tasks. Your institution could meet this goal by eliminating the need for faculty members to approve students' course registration.

Identify clear, realizable, measurable goals and objectives. Let's propose by the year 2007 your institution would like 60 percent of tuition/revenue to funnel through online payments. How would your institution successfully achieve this goal? What processes would need to change? Based on your client survey, would e-commerce improve their satisfaction? Would the registrar's office or accounting department become

more efficient? Does your administrative software have the functionality and integration to manage e-commerce? Are you compliant with the many e-commerce standards such as CISP? How would your online security procedures change to handle transactions online? As you create each goal and the subsequent objectives, remember to refer back to your data to determine if the strategy aligns with your constituents' needs.

STEP 3: TEAM PLAYERS

Build a cross-functional team to assist you with this change in your office and across the campus. The team should include, but might not be limited to, individuals from your IT department, faculty member representatives, students, and individuals from other departments. Executive representation is also critical for early acceptance and momentum. If appropriate, involve the institution's technology partner. They could shed light on how to maximize your technology, utilize existing higher education best practices, and even help improve processes.

Keep the size of the team manageable for optimum efficiency, with no more than eight people. Each member should understand the objectives of the team. But be careful of assembling a "rubber stamp" team. It is important to move forward with your goals, but it is crucial to analyze each objective and receive honest feedback.

STEP 4: TECHNOLOGY

Technology fuels your students' lives from video games to cell phones, and computers to PDAs. But before you spend money on new software and hardware to support this new high tech office, research and understand the capabilities of your institution's current technologies. You may find your existing software and hardware have the functionalities to completely meet your new technology needs.

Make sure to include any constituents' technological specifications or requests in your plans. For example, people forget passwords and usernames all the time. How do they get help? Who will supply the new passwords?

You should consider security issues with every online transaction—from e-commerce to online registration. For example, would all your students feel comfortable if your online system was personalized? Should the PC screen time-out in case the student forgets to log out in the library or other public places? Your initial surveys and research can help you analyze these sometimes difficult questions. And don't forget you can always continue to investigate issues and survey your constituents to get a clearer understanding of their behaviors.

STEP 5: STATE YOUR CASE

You have your data baseline, the goals have been created, technology assessed, and now you have assembled a crack-team of experts. It's time to develop a business case solidifying your goals and objectives. Specifically explain what processes will change, what will be required to support the new procedures, and tie each and every detail to hard or soft savings, and the customer satisfaction survey results.

Hypothetically, let's say your research and data support posting all grades and rosters online. In your business case, reinforce this goal with the cost savings from printing and mailing, plus the intangible time savings of your students and faculty members. The positive outcomes from the new procedure might be obvious to you, however other members of your organization might not see the benefits immediately. The business case helps illuminate the positive results and foster motivation on campus.

Creativity and flexibility are key attributes at this stage of the plan. Be open to change the direction, goals, objectives, and more. You do not need to implement all the new changes at once; adjust your plan to launch in phases. Also be prepared for possible political blockades. No one likes to speak about the politics in any organization, but we all know it is an unfortunate reality. Your solid business case will strengthen your position and help buffer political-based criticism. Consider utilizing your software/business consulting partner for support. He/she is more likely to be looked at as an objective participant.

The Bottom Line

Your plan has been approved. You have the funding. Now what? Work with your team to create an action plan that includes delivery dates, assessment, and testing. Include in the rollout plan training for everyone (students, faculty, administrators, staff members). Initiating and promoting change is never an easy task, so be prepared for some old

habits and processes to resurface during the transition. Throughout all of these steps, measure everything and establish new baselines and goals periodically.

As the changes are implemented, you will watch your office become more efficient. Customer satisfaction will increase. And hard and soft costs will dramatically decrease. Some institutions have even remodeled their registrar's office to physically reflect the new way of doing business. One institution eliminated its counters in the registrar's office and created a collaborative space with comfortable chairs and sofas. They added self-service PCs and kiosks so students could manage their education right there, but also maintained personal assistance in case a student needed help.

Focusing on the student is easy. They are at the center of your mission. Examining your office's day-to-day processes and tasks to more efficiently meet the needs and behaviors of those students is a little more difficult. Hopefully the suggestions presented in this article will help you think about possible changes within your office, and transform it into a place that will promote student satisfaction now and in the future.

ABOUT THE AUTHOR

Graham J. Tracey is currently the Product Manager for Enrollment Management and Student Services at Datatel, Inc. He studies higher education trends and works with industry thought leaders to develop solutions designed to help colleges and universities achieve their Strategic Enrollment Management goals. Graham is a frequent presenter at industry conferences such as, AACRAO's Annual Meeting, AACRAO's SEM Conference, the League for Innovation, and EDUCAUSE.



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Financial Literacy and Retention

 Ruth L. Adams

As higher education administrators, we know it is more cost-effective to keep students than to recruit them. Understanding financial literacy—and how it impacts student retention and persistence on our campuses—is an important concept for us to comprehend. It is no secret that learning how to handle money and finances involves understanding:

- Money management
- Income versus expenses
- Spending and credit
- Value of savings and investing.

We all want our students to be financially literate when they enter the world of higher education. The truth, however, is that most students don't come to college understanding financial aid, loans, debt, rising costs, and managing a budget. In 2002, the Jumpstart Coalition completed a national benchmark study of high school seniors' knowledge of financial literacy. The average score was 50.2 percent—a failing grade. More shocking was that 65 percent of these students felt “very sure” and “somewhat sure” in their ability to manage their finances. The study's results demonstrate the students' true lack of knowledge. For example, with regards to undergraduate credit card debt:

- 21 percent owe \$3,000–\$7,000 on their personal credit cards.
- 75 percent of credit card holders have one card maxed out.
- 64 percent do not know what the interest rate is on their credit cards.
- Bankruptcies for those under age 25 years have increased from 15,000 cases in 1995 to 150,000 cases in 2000.

It's A Gamble

Many students come academically prepared for higher education, but are gambling their education on inadequate financial preparedness. Ask any of your students why they are

leaving your institution and the number one answer will be “financial reasons.” Many of us have wondered if that is true; data from the partnership between USA Funds and Noel-Levitz now tell us it is. USA Funds sponsored a study of how gaining financial literacy skills figures into a student's perception of value in their college experience. Their study also found that students quickly realize they need to learn about financial literacy, that it is a priority for them, and that they expect their institution to fill that need. The vast majority of students also rate the training they do receive as low to unsatisfactory. How do you change that? That is what we are asking ourselves at Seattle Pacific University. So, we looked at what other institutions are doing and looked closely at the recommendations coming from various financial groups.

Possible Answers

There are many possibilities with regards to teaching financial literacy to students. With the assistance of your student financial services area or your financial aid or student accounts office, you can create something personalized and well-tailored to your institution. Or you can investigate the tools and materials that are available from banks and loan guarantee associations. Either way, the best news is that it can take as little as ten hours to change financial illiteracy into financial literacy. After receiving instruction, 58 percent of students improved their spending habits, and 56 percent of students improved their saving habits.

Many outside agencies provide financial literacy development tools and curricula free of charge to higher education institutions. Many have consultants who are willing to assist you with building a program or are willing to come to your campus and do presentations for your students.

The following are some examples of what other institutions are doing:

- Offering a class in financial literacy, with some institutions awarding academic credit.
- Embedding financial literacy in their freshman-year curriculum.
- Make it a part of all financial aid presentations to new students.
- Adding workshops to orientation.

The best programs seem to integrate this with existing programs and build support and collaboration across the campus. Making financial literacy the responsibility of the financial side of the university is not as effective as building a collaborative approach with residence life and student life programs, freshman-year programs, and even graduate programs.

Timing Isn't Everything

There isn't a perfect time to provide this training; in fact, it is better to provide it more often and with a wide variety of options. You need to start with an institutional assessment of what you are currently doing.

- Do you do anything?
- What will you do?
- How will you know if you are successful?

ASSESS YOUR STUDENTS

- Are they at risk? Start by looking at your loan default rate.
- Do you see trends in the type of students who are defaulting?
- How does that overlay with those students' retention?
- How many graduated?
- How many left after one year?
- Does academic success play into it?
- Where do they come from?
- How old are they?

The answers will give you a good idea who to connect with and when to connect them to financial literacy training.

Next is choosing how you want to intervene; both from an institutional and student standpoint. Keep in mind that the most effective programs intervene often and in multiple ways.

Is it worth the work?

We all have plenty to do, and we are asked to do more with less in almost every new budget cycle. Should creating a training program on financial literacy be a priority in our over-worked world? Well, do the math to see if the work cost measures up to retaining a student in a cohort.

COST OF ATTRITION

- Enter your full time credit count and multiply by your per credit rate. Example: 12 credits x \$200 = \$2,400 in tuition each semester

- Now enter your new freshman student enrollment: Example: 1,000 new students full time in 1 semester brings in \$2.4 million gross revenue (\$4.8 million a year)
- Now enter your attrition rate after one year and the actual number who left for financial reasons: Example: 80% = loss of 200 students; 100 left for financial reasons.
- Result: 100 students leave for financial reasons x \$2,400 loss per semester x 6 semesters.
- Over the next three years, your institution has a gross loss of \$1,440,000

If you implemented a financial literacy training program and kept 10 of those 100 students, you saved \$144,000. Those are hard numbers to argue with! Assessing your program's success will give you clear evidence that the work was worth it.

What has been done at SPU?

I met with the director of student financial services (SFS) at Seattle Pacific University to see what he knew about these programs and to get his input and opinion on their value. He in turn talked with our student government's financial aid committee. They were more than interested in the possibilities; in fact, they wanted this to be their focus for the year. Then the data and questions were presented to our faculty's retention committee. They too, were more than interested.

That gave our SFS director the opportunity to add this priority to a new position he was hiring so we could make sure this new venture had a home and an advocate. Now we are creating an online tutorial for our incoming students. All new students will be required to enter our online education system to learn about financial literacy, our systems, and processes before they come to campus and register for classes. There is a quiz at the end—not to grade students—but to see where the training is needed and to determine our intervention priorities.

This is a start for us! It is exciting to see if we can change those “leaving for financial reasons” into “making a well-planned financial decision to stay and graduate.”

Acknowledgements and Resources

Jordan Grant, Director, Student Financial Services, Seattle Pacific University
 Carole Ann Simpson, Debt Management Consultant, USA Funds Services
 EdFund Web site: <www.edfund.org/home.html>
 Jumpstart Coalition Web site: <www.jumpstart.org>
 USA Funds Web site: <www.usafunds.org>

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Ruth L. Adams has been University Registrar at Seattle Pacific University since 1995. Prior to that, she was the Associate Director on that campus. PACRAO member since 1992; on The Writers Team since 2004.

Student Services: A Student's Eye View

by Angela Runnals

Simon Fraser University in Vancouver, British Columbia (BC), celebrated its fortieth anniversary in 2005. A relatively new university, it has nevertheless seen tremendous changes over the past four decades. As admissions officers, registrars and other student services professionals know, the rate of change is continuing to increase dramatically. But, fortunately, the focus is returning to the student; it wasn't always clear that was the case.

Let's look at what the world of admissions officers and registrars has looked like from the point of view of a Simon Fraser University (SFU) student who started school in 1965, 1975, and so on.

The Sixties

Jane applied to SFU in the spring of 1965 and was accepted for the fall semester. As the University opened its doors for the first time in September 1965, she was deemed a Charter Student and received a commemorative certificate.

Although Jane didn't think much about it, it was a tremendous feat for SFU to admit and enroll 2,500 undergraduates in 1965. A January 1963 report to the BC Minister of Education recommended the creation of a new provincial university. A chancellor was appointed in May 1963, and the firm of Erickson and Massey won the campus design competition. Construction began in spring 1964 and the University's physical structure was essentially completed in the summer of 1965. It was built to allow for a future enrollment of 18,000 students.

The new university was designed academically to complement the other universities in the province without unnecessary duplication of programming. It was planned to operate all year round, using a trimester system with intake possible in September, January, or May.

ADMISSION

As a grade 12 graduate of the BC secondary school system, Jane needed an average of 60 percent for basic regular admission. The admission requirements were comparatively simple and consequently easy to understand! She was required to submit two passport-type photographs with her application form. Upon acceptance, she had to have a medical examination and provide evidence of smallpox immunization before completing registration.

Those of Jane's friends who didn't qualify for regular admission could apply under the Special Entry category. They had to submit references, write entrance exams, and appear before the Admissions Committee.

REGISTRATION

What were Jane's program choices as an undergraduate 40 years ago? She could choose from 27 100- and 200-level courses in the Faculty of Arts, 17 courses in the Faculty of Science, and two courses in the Faculty of Education.

How did she register? With keypunched cards, of course (remember those?). She lined up at a table to get her registration cards from staff and lined up again at the cashier's office to pay. She paid a total of CAN \$214 for tuition for the semester, plus a \$5 student activity fee. Certified check, bank, or postal money orders were acceptable forms of payment.

As a young woman active in the Girl Guide movement, Jane obtained a scholarship of \$100 from the Vancouver Girl Guides Council. With the scholarship, she accepted her stated "moral obligation" to maintain her ties with the Guide movement.

A TIME OF CHANGE

As a female student in 1965, Jane did not worry too much about the fact that documents like the University Academic

Calendar/Catalog used the third person masculine to refer to students. And she did not worry too much about gender imbalances in programs. She was a good, practical student who handed in her assignments on time, progressed through her program, and graduated with a respectable B.A. in English. However, over the course of her studies she became rapidly aware of social changes going on both inside and outside of the University. Eight years after graduating, she came back for a couple of years as a Special Student, to take women's studies courses in the new program administered by the Women's Studies Coordinating Committee.

STUDENT SERVICES

The Registrar's Office, with a grand total of 20 admissions and records staff, was located on the first floor of the library. The registrar was responsible for admissions, records, the administration of examinations, degree granting, convocation, calendar publication, the assignment of teaching space, data processing, residences, financial aid, foreign students, and chaplains.

The Financial Assistance Office managed 16 scholarships and awards and 31 bursaries. Other support services available to students were: a health services office, a residence and housing office, an employment office, and a chaplains' service. There was a dean of women, who rapidly achieved additional responsibilities in the first, turbulent years.

...early in September of 1965, the Registrar resigned, and the Dean of Women became the temporary Acting Registrar. There was no replacement appointed for the Dean of Women. The replacement Registrar (appointed in December of 1965) did not want responsibility for student services, and as a result, the University's Board of Governors asked the Dean of Women (who had served as Registrar to that point) to develop an office of Student Affairs to administer and expand these services. This office took on the responsibilities of Counseling Services, foreign students, clerical work for Canadian University Students Overseas, preparation of student information booklets, the International Office, and the Day Care Centre.

— Caitlin Webster, Frances Fournier, Ian Forsyth, Enid Britt, Sarah Cooper (SFU Archives, February 1998)

It is strangely nostalgic to discover that even 40 years ago we were combining registrar functions with student affairs functions—and then separating them again a few years later!

GRADUATE STUDIES

In 1965, there were 80 graduate students. With such a small population, the graduate studies staff support was very personal in approach. Every piece of paper—every application and every degree recommendation—was copied to the president of the University. Forms were created and typed up as the need arose.

The Seventies

Between 1965 and 1975, there was a lot more shaking down, reorganization, and expansion.

In January 1970, the Board of Governors created a third vice-presidential position, Vice-President, University and Community Services. This office had responsibilities for fund raising, public relations, general studies, and University Services. By the time the position was filled in 1971, the name had been changed to Vice-President, Development. The name was soon changed to Vice-President, University Services.

Around this time, the name of the Student Affairs office was changed to that of University Services, and the title of the head of this office changed from Dean to Director ...

In addition to the Resources office, the Information office, and the School Liaison officer [who reported through the Admissions office], the office of Vice-President, University Services was responsible for the University Services office, which then contained Counseling Services, the Chaplains' Office, Housing Services, Health Services, the University Theatre, the Student Placement Office, and the Reading and Study Centre.

— Caitlin Webster, Frances Fournier, Ian Forsyth, Enid Britt, Sarah Cooper (SFU Archives, February 1998)

In 1973, a Faculty of Interdisciplinary Studies was created, comprising departments of communication studies, criminology and kinesiology, and programs in computing science, Africa/Middle East studies, Canadian studies, and Latin-American studies. This rounded out the standard academic programs and began to define SFU's new areas of specialization in the BC postsecondary system.

As the University matured, the volume of information and regulations naturally expanded. From a slim handbook-sized volume of 112 pages in 1965, the academic calendar was now published as a 474-page undergraduate calendar and a 222-page graduate studies calendar.

Marcus registered in the communication studies program in 1975. He entered a university with a reputation for having radical, socially active students (and some pretty lively faculty, too). But in some ways the university remained conservative:

- Students were assumed to be school-leavers. There were no evening classes, so as a mature student with family responsibilities, Marcus found he had to juggle part-time work with full-time studies. However, there was a daycare center on campus, albeit with a lengthy waiting list.
- Privacy wasn't necessarily respected. Grades were posted on office doors with students' names attached. Marcus complained and requested his instructor post student numbers instead.

Coordination of services was still a long way off. Services were completely separate so students had to deal with different offices located all over the campus, learn different approaches, and deal with different hours of operation.

"You felt like you were at the mercy of different, labyrinthine sets of rules."

—Janis Rutherford, staff member and student

However, changes were taking place all the time. Official document language now used constructs like "him/her." There was a Women's Centre, functioning as both a drop-in space and a resource center. Guest speakers talked about issues ranging from birth control to international politics and from sexual assault and harassment to the peace movement.

REGISTRATION

In the early seventies, students filled out their registration forms and either mailed them in ahead of time or lined up on in-person registration day to hand them in. Operators using terminals connected to the mainframe computer entered the data in priority order onto the computer system. Students lined up again if they needed to drop or add courses.

Marcus flourished as an undergraduate and went on to become a graduate student. He became a student activist and lost his teaching assistantship after organizing a mock funeral for the president to protest tuition increases. However, he stayed on and eventually obtained his Ph.D. After a stint at another institution, he is now back at SFU as a faculty member.

The Eighties

Kayleigh, an Australian, was admitted in 1985 as part of SFU's quota of international students. Since her first language was English, she was not required to take the Test of English as a Foreign Language (TOEFL). The basic grade point average required for admission had risen to 2.5.

Even though she had no language problems, Kayleigh had some difficulties adjusting to studying in a strange country where at first she did not know anyone. She was grateful for the support provided by the International Office, who met her on arrival at the airport. Fortunately, she applied early enough to get a place in the Madge Hogarth women's residence, where she quickly made friends. She made more friends through intramural sports arranged by the department of recreation. Kayleigh was a "joiner," so she soon settled in and felt like part of the campus. When she needed help after the breakup of a relationship, she was grateful to find that support services included a counseling service, staffed by psychologists and graduate trainees. This office had existed since the early years of the University, despite the skepticism of some members of the early board of governors who doubted the need for such a service.

The mood on campus was much calmer—some thought a lot less exciting—than it had been in the previous decade. A business-like attitude predominated among students. There was an increasing demand for service more tailored to students' needs.

Additional support services available to students included the Academic Advice Centre. Now that a good range of

classes was offered in the evening, advice was also available from 5:00 p.m. to 8:00 p.m., four days per week.

REGISTRATION

Kayleigh mailed in her course selection form with a \$100 registration deposit. She was assigned a registration priority number based on her cumulative grade point average and number of credit hours. It was a big improvement from lining up, though not the social event that the lineups could be!

STUDENT SERVICES

The Office of the Registrar encompassed admissions, records, scheduling, and liaison officers. There were 25 people, including the registrar and secretary. There were no personal computers in the office yet. Letters were individually typed.

Student records were kept in paper files in the vault. The vault was right beside the Registrar's Office coffee room and was never locked. Concerns about security of records were yet to be raised, though in the next decade legislation balancing freedom of information with protection of privacy would change the way records were handled, and paper records would be largely replaced by electronic records.

Financial Assistance was still an entirely separate department. At this time, they were responsible for the administration of almost 200 scholarships, awards, and bursaries.

The Nineties

James was admitted in 1995 as an international student from Korea. International students were limited to not more than 7 percent of the year's undergraduate intake, but in practice the numbers admitted remained a little below that level. Still, increasing internationalization enhanced campus life.

It took a while for James to look through the array of programs available in the Faculties of Applied Sciences, Arts, Business Administration, Education, and Science. He chose a joint major in communication and business administration. By this time, the University's downtown Vancouver campus had been open for six years and had established significant links with the business community. James had his eye on the University's master of publishing program—based at the downtown Canadian Centre for Studies in Publishing—as a follow-up to his undergraduate studies.

The array of options for students was by now becoming dizzyingly complex. Programs could be honors or joint honors; major, joint major or double major; major-minor, extended minor, or double major. Study options included evening and distance education studies, foreign exchange programs, and co-op work placements.

James was assigned a registration date, after which he registered by telephone. The Registrar's Office had launched its first Web site in 1994. As a technically savvy student, James checked back frequently to see what information and (eventually) services were offered on the Web. A polite but outspoken student, he frequently offered technical critiques and suggestions.

STUDENT SERVICES

Staffing of support services expanded, though perhaps never enough to fully manage the volume of students needing assistance. Organizationally, Financial Assistance had been incorporated into the Registrar's Office in the late eighties, but the Cashier's Office remained in a separate location until all the existing student services departments moved to a new student services building—the Maggie Benston Centre—in 1996. This “one-stop shopping” approach was, of course, part of a general movement on the part of postsecondary institutions to become more responsive to students' needs, to become more efficient in their operations, and to think in a student-centered, rather than institution-centered way. Diversity of the campus community became both a reality and a cause for celebration.

2005

THREE CAMPUSES

To its main campus in Burnaby and its downtown Vancouver campus, the University has added another campus, in Surrey, BC, that offers eight programming areas:

- TechOne, a cohort-based, first-year, interdisciplinary studies program in the Faculty of Applied Sciences
- Interactive Arts and Technology, an interdisciplinary approach to performance and media arts, interaction design, new media environments, and technology in arts and design
- Computing Science
- Business Administration
- Explorations, a cohort-based program in the humanities and social sciences
- Science
- Mathematics
- Education

In all, SFU offers over 100 programs.

STUDENT SERVICES

The Department of Student Services comprises the following areas: academic resources, admissions, athletics, childcare society, centre for students with disabilities, communications, co-operative education, financial assistance, first nations student centre, health, counseling and career services, interfaith, records and registration, residence and housing, senate support, student academic affairs, student accounts, student development and programming, student recruitment, and U-Pass (an office managing transit passes for students). There are just over 200 full-time staff and some student assistants whose numbers vary according to the time of year.

Registration is done via the Web on a portal system called goSFU. A team of student assistants is available at extended hours to help with registration and other student record inquiries. The portal approach is no longer new, but its avail-

ability has helped continue to change the student services culture to one more tailored to students' needs. Self-service through the portal has cut down on the need to stand in line for routine transactions, so that staff can devote more of their time to assisting with complex problems.

Over 1,900 entrance scholarships are offered, with a value of CAN \$2.8 million. Although tuition continues to rise (currently basic undergraduate tuition for domestic students is at CAN \$145 per credit hour), there are more options than ever for students to put together a plan to finance their education that could include scholarships, bursaries, awards, loans, and work-study positions.

Student statistics:

- Full-time undergraduate: 11,451
- Part-time undergraduate: 12,209
- Graduate: 3,401
- Women make up 56 percent of undergraduates and 55 percent of graduate students.

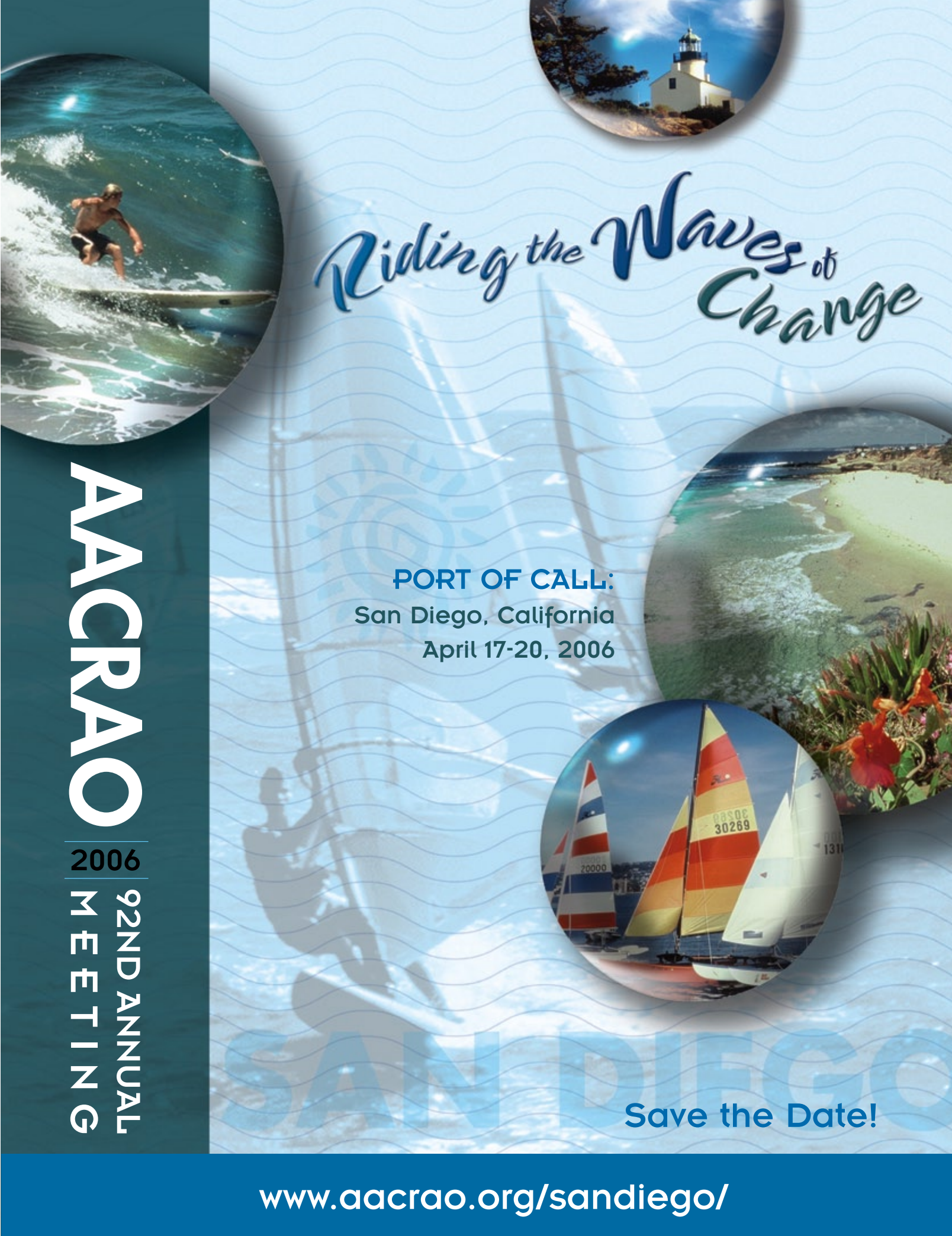
So, where is SFU in 2005? The range of programs continues to widen and courses may be taken in person at three campuses, with some distance education and online options available. Many students study part-time, combining work with obtaining a degree or diploma. The last decade's notion of students as customers, combined with the availability of increasingly sophisticated technology, has led to most routine services being available on the Web. Staff time is freed up for unusual or detailed inquiries. Admission is becoming ever more complex in response to evolving priorities and knowledge gained through enrolment management, with new literacy and quantitative/analytic skills requirements being introduced for Fall 2006 entry.

Like other postsecondary institutions in today's competitive environment, SFU works harder on recruitment and retention. The two-year-old Office of Student Development and Programming offers extensive student orientation, parent orientation, leadership programs, and drop-in workshops.

We make fewer assumptions about who students are and what they want. Sometimes, we actually ask them what they want and reflect their answers in our programming and services. Our current three-year plan says, “In developing new programs or services, directors will place emphasis on (1) what, where, when, why, or how students will benefit, and (2) how the University will benefit and what value will be added.” We partner with students on projects and employ them through work-study programs. Perhaps the continuing evolution of the role of students is the social change to watch for as we head into our fifth decade.

ABOUT THE AUTHOR

Angela Runnals was an Assistant Registrar responsible for Web and print publications at the University of British Columbia for fifteen years, following experience as a technical editor and workshop developer. She is now a Web Communications Coordinator at Simon Fraser University.



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