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College choice has been an area of inquiry in higher education research for decades. While this scholarship has evolved, it has yet to incorporate the fastest-growing sector of higher education: for-profit colleges and universities. The authors investigate the admissions and recruitment conditions that would lead students—particularly those from low-income backgrounds—to consider a for-profit college over a community college. Specifically, the paper considers information provided to prospective students by several for-profit and community colleges in an urban city. On the basis of this research, conclusions and future directions for college choice theory and organizational practice are developed.
recent proliferation and politicization of for-profit colleges has prompted important scholarly exploration (Kinser 2006; Rosenbaum, Deil-Amen and Person 2009; Ruch 2001; Tierney and Hentschke 2007). Of current concern is the growing number of students—particularly low-income students of color—enrolling at for-profit institutions that could place them at considerable risk for debt (Chung 2012; Garrity, Garrison and Fiedler 2010; Hing 2012; Ruch 2001). Comparable degrees typically could be acquired at a community college for significantly less money. One possible interpretation is that for-profit colleges trick customers into buying a poor product. The purpose of this paper is to investigate this notion and to suggest that such an interpretation may be simplistic. We called upon the student choice literature to focus on one particular part of the decision to attend an institution: the entry point. Over the course of three months, we called five community colleges and five for-profit institutions to gauge how they responded to a prospective student. Rather than suggest that one institution is good and another bad, we suggest instead that how institutions engage with prospective students is in part a reflection of the culture and ideology of the institution and may affect prospective students’ choice of which college to attend.

Accordingly, we review the literature on college choice, focusing on students’ initial engagement and how they construct going to college. Our intent is to explore commonalities and differences between for-profit colleges and universities (FPCUs) and public community colleges as they pertain to admissions practices. We begin by providing a brief background of the college student choice literature. In the second part of this paper, we explore the missions and admissions practices of FPCUs and community colleges. We then present results from a case study that investigates information presented to a prospective student by several FPCUs and community colleges. We conclude with new considerations relevant to the future direction of college choice and admissions research on for-profit and community colleges.

STUDENT COLLEGE CHOICE

Whether to attend an institution of postsecondary education and which institution to attend are two of the most important decisions prospective students make (Johnson and Chapman 1979). These decisions are guided by the quality of information prospective students gather. Hossler and Gallagher (1987) define college choice as a process or stage(s) students go through to determine which college to attend. Models of college decision making generally examine the stages that lead to a choice. Hossler and Gallagher (1987) identify three critical stages: (1) predisposition, in which the person makes a decision to attend college, (2) search, wherein a person begins to seek information about colleges and narrows his alternatives, and (3) choice, during which the student considers alternatives and decides which college to attend. This particular
model emphasizes the role of the student rather than the institution in the decision-making process.

Hossler, Schmit, and Vesper (1999) updated this model to include information-gathering, information-processing, and decision-making activity. While the three initial stages of college choice remain, the new model emphasizes the information students gather and the social capital they access. A greater focus on information processing helps us understand the least explored part of the college-choice process: the search. This paper focuses on the search, when prospective students gather and construct information about institutional admissions practices. The importance of obtaining accurate information about college extends well beyond enrollment decisions (Cabrera and LaNasa 2000). Satisfaction with college and the achievement of educational and career goals appears to be contingent in large part on the quality of information secured during the search stage (Cabrera and LaNasa 2000).

The college choice process often is likened to a funnel in which prospective students consider attending higher education and finally determine where they will attend (Hossler and Gallagher 1987; Litten 1982). As students develop firm aspirations to attend college, they begin to focus on where they would like to attend. Cabrera and LaNasa (2000) identify four primary factors that influence enrollment at a specific institution: institutional quality, availability of academic majors, the student’s ability to finance her enrollment, and campus life. We engaged admissions counselors particularly on the topics of enrollment and finance.

**COLLEGE CHOICE: THE SEARCH PHASE**

The search phase refers to the examination of colleges’ attributes and characteristics. According to Chapman (1986), relevant college attributes include cost, academic quality, post-graduation career prospects and opportunities, quality of student life, and related considerations. The search phase concludes with the application decision—i.e., when a student decides to which colleges she will submit formal applications for admission (Chapman 1986). Students utilize a variety of strategies to obtain information during the search phase. The phase is not uniform for all prospective students and tends to vary in intensity over time (Cabrera and LaNasa 2000; Hossler, Schmit and Vesper 1999). Prospective students may transition among three different approaches to searching: attentive, active, and interactive (National Postsecondary Education Cooperative [NPEC] 2007). For example, many students may be receptive or attentive to pertinent information even though they may not actively seek it—particularly during the early phases of the search process (NPEC 2007).

The search phase involves the accumulation and assimilation of information necessary to develop the list of institutions to which the prospective student may apply (Cabrera and LaNasa 2000). This list is largely dependent on the thoroughness of the prospective student’s search process, which itself is largely determined by socioeconomic factors (McDonough 1997). In general, compared to their less affluent peers, more affluent students rely on several sources of information (including private counselors), are more knowledgeable about college costs, are more likely to broaden the search to include a wider geographical range, tend to consider higher-quality institutions, and have parents who planned and saved for college (Flint 1992; Hossler, Schmit and Bouse 1991; Hossler, Schmit and Vesper 1999; McDonough 1997; Tierney 1980).

**NONTRADITIONAL STUDENTS AND COLLEGE CHOICE**

College choice literature tends not to focus on community colleges and the growing percentage of for-profit college students. It often describes for-profit and community college students as ‘nontraditional’ and, more specifically, as more than 23 years old (Tumblin 2002). Bers and Smith (1987) found that nontraditional students often decide to attend college because of a significant personal event or dramatic change at work. College characteristics that influence their choice include convenience and affordability (Bers and Smith 1987; Tumblin 2002). In general, nontraditional students prefer colleges that are close to their homes and are reluctant to enroll at more distant colleges because of the inconvenience, time, cost of parking, and concerns about safety. Affordability is of high interest to students trying to finance their own education (as well as their children’s) and to single parents responsible for financially supporting their families (Bers and Smith 1987).

**COLLEGE CHOICE AND FOR-PROFIT COLLEGES**

In one of the few studies regarding for-profit college choice, Chung (2008) found that students self-select into for-profit colleges and that for-profit college choice...
is affected by community college tuition. Chung (2008) asserts that the probability of a prospective student choosing a for-profit college is heavily influenced by his socioeconomic background and parental involvement in his schooling. Chung reports further that students with higher secondary school absenteeism are more likely to enroll at for-profit colleges and that the number of for-profit colleges in a prospective student's area is important in his decision making. Chung asserts that a primary difficulty in defining choice outcomes derives from the fact that students—particularly those attending for-profit colleges—historically have been “very mobile” across the set of available institutional choices. Upon completing high school, they are more likely to delay college; after enrolling, they are more likely to drop out of college, transfer, and re-enter a different college.

Research documents these enrollment patterns among for-profit college students and focuses particularly on the patterns of students of color (National Center for Education Statistics 2012). (See Figure 1.) Black students are among those who increasingly are opting to pursue post-secondary education at for-profit colleges. As of 2011, the nation’s top awarder of baccalaureate degrees to black students was the University of Phoenix, the largest for-profit college in the United States (Hing 2012). From the 2004–05 to the 2008–09 school year, enrollment of black students at four-year for-profit schools increased 218 percent but only 24 percent and 27 percent at public four-year and two-year institutions, respectively (Hing 2012). For-profit institutions clearly are changing the choice patterns of prospective students in general and of prospective students of color in particular. (See Figure 2.)

COMMUNITY COLLEGES AND FOR-PROFIT COLLEGES: PURPOSES AND PRACTICES

In addition to their commitment to meeting their local communities’ educational needs, community colleges seek to serve all who have the need and desire to participate in postsecondary education (Gleazer 1980; Mullin 2010). Community colleges offer a variety of services, including academic and career counseling, tutoring, and developmental education, as part of their effort to respond to a wide range of student readiness. In part because of their rapid expansion and wide-ranging missions, community colleges are sometimes poorly understood, and policy makers often struggle to determine how to utilize them to meet labor and market goals (Rosenbaum, Deil-Amen and Person 2009).

Community college students usually are accepted on a first-come, first-served basis, up to the capacity of the institution (Bailey, Badway and Gumport 2001). Community colleges’ open admissions policies have contributed to their burgeoning enrollments as well as to concern about their funding and capacity constraints. These institutions are particularly important because they are the primary source of postsecondary education opportunity for ethnic minority and low-income students as well as for those who
attended poor high schools and/or performed poorly in high school (Rosenbaum, Deil-Amen and Person 2009).

At its simplest level, the for-profit postsecondary education sector comprises a group of institutions that awards post–high school degrees or credentials and that is exempt from some of the requirements that constrain private, non-profit postsecondary schools (Deming, Goldin and Katz 2012). Although it often is discussed as a recent phenomenon, the for-profit sector has been a component of the educational enterprise since the 1800s (Kinser 2006). However, only recently have for-profit institutions begun to have a profound impact on the postsecondary education landscape. Enrollment at the country’s nearly 3,000 for-profit colleges has increased an average of 9 percent per year over the past 30 years—a far greater rate than non-profit public and private institutions’ 1.5 percent annual enrollment increase during the same period (Wilson 2010). During the 2008–09 academic year, nearly 1.8 million students were enrolled at FPCUs in the United States (Bennett, Lucchesi and Vedder 2010). For-profit colleges have contributed to an increase in the nation’s overall college attainment: The share of degrees produced in the United States by FPCUs has increased from less than 1 percent 40 years ago to nearly 10 percent in 2007 (Tierney and Hentschke 2007). FPCUs’ ability to efficiently and quickly meet new demand (and to discontinue programs which no longer yield a profit) is often cited as crucial to their growth, as is their reliance on part-time faculty, corporate governance structures, standardized and non-teaching faculty–generated curriculum, minimal investment in buildings and/or campuses, and little or no support for research (Garrity, Garrison and Fiedler 2010; Morey 2004; Tierney and Hentschke 2007).

Overall, FPCUs enroll a much more diverse group of students than do traditional public and private non-profit universities (Bennett, Lucchesi and Vedder 2010). Studies have long observed that FPCUs tend to cater to and are chosen by those students defined as disadvantaged in that they tend to have or to come from families with modest or low incomes and minimal education and who are racial minorities or otherwise underrepresented in higher education (Ruch 2001). (This may be an artifact of their frequent location in urban centers typified by diverse and economically disadvantaged populations.) Unfortunately, for-profit institutions bestow the least certain educational and economic advantages upon their students and graduates (Bound, Lovenheim and Turner 2010; Institute for Higher Education Policy 2002).

Key criticisms of the for-profit higher education industry cite its aggressive marketing and lack of admissions criteria (Seiden 2009). Some for-profit institutions have been sanctioned for their overly forceful marketing and enrollment tactics. They also have been criticized for marketing to any and all potential students, regardless of their ability to perform college-level work (Seiden 2009). Most recently, for-profit colleges were the target of a bruising federal investigation led by Senator Tom Harkin (D-IA) (Lee 2012). Of note is the overall scarcity of literature on FPCUs. The influence and ethics of for-profit colleges have been debated in newspaper articles (Lewin 2012; Wilson 2010), but empirical research of the sector is scarce.

METHODS

We undertook a comparative case study of the institutional admissions practices of for-profit and community colleges. The goal was to gain a better understanding of admissions practices at for-profit colleges, particularly in comparison to those at community colleges. After receiving approval from the Institutional Review Board, one member of the research team posed as a prospective student interested in earning a certificate or associate’s degree in business. The “prospective student” called each institution’s admissions officer in order to ask questions related to the admissions and enrollment process. Specifically, the “prospective student” sought information about the program, how she would be supported as a student, financial aid, and employment outcomes.

SAMPLE

The sample included five community colleges and five for-profit colleges in a city with a population of more than 3 million people. To ensure that the institutions were similar and accredited, IPEDS 2011 data were examined. (See Table 1, on page 7.) The goal was to survey a pool of institutions a prospective student in the search phase might realistically consider attending. Beyond this, choice of institutional participants was random.

ETHICAL CONSIDERATIONS

“Mystery shopping” is an investigation in which a person assumes the role of a client or prospective customer in
order to assess the quality of a service or obtain specific information for research purposes (Walker and George 2010). Mystery shopping has long been a valuable tool for evaluating service provision in the business world, particularly in retail services (Walker and George 2010). Given that mystery shopping relies on an element of deception in that the “shopper” has to ensure that those serving her are unaware of her real purpose, questions have been raised relative to its ethics. In addition to gaining the approval of our institution's IRB, we collected no revealing or identifying information about any admissions counselor in order to ensure that institutions and practitioners remained anonymous at all stages of the investigation. An African-American female in her mid-20s served as the “mystery shopper” and used a pseudonym.

DATA COLLECTION AND ANALYSIS
Semi-structured interviews (i.e., conversations with admissions counselors) provided data for this study. The researcher utilized the same script in soliciting information about each institution but was flexible in conversing with each admissions counselor. No specific amount of time was allotted for the interviews because their length was contingent upon how much information each admissions counselor was willing to provide. No interview lasted longer than 30 minutes. Data initially derived from two sources: transcriptions of phone calls with each institution's admissions counselor as well as the mystery shopper’s documentation of her thoughts as a customer throughout the information-gathering process.

TRUSTWORTHINESS AND VALIDITY
Lincoln and Guba (1985) assert that qualitative data and qualitative evidence are not always synonymous, so it was important to highlight the qualitative evidence in the study in order to build trustworthiness and validity. The trustworthiness of the research relates to the researcher’s ability to conduct and present a fair and unbiased investigation in the best interest of the participants (Creswell 1998). Lincoln and Guba (1985) rely on credibility, transferability, dependability, and conformability to affirm the trustworthiness of a naturalistic approach. To ensure credibility, the researcher compiled field and observation notes immediately after each of the interviews and called each institution multiple times to ensure that responses were similar across representatives. Transferability has to do with the degree to which the findings can be applied to other settings (Lincoln and Guba 1985). We developed thorough descriptions of the mystery shopper’s experiences on the basis of the memos and notes she took during her conversations. For dependability, we used a code/recode procedure (i.e., we coded the data and then waited for a period of time before re-coding it). Conformability has to do with the degree to which the findings are based on the condition of the research (Lincoln and Guba 1985). We developed an electronic audit trail of all research documents, including: interview journals, audio-tapes, and transcripts.

LIMITATIONS
The ten colleges in our study represent only a small number of community colleges and for-profit colleges in the United States. Our sample does not account for the het-

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<th>Sample Characteristics, by College Type</th>
<th>Community College</th>
<th>For-Profit College</th>
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<td>Institutional Profile</td>
<td>Public 2-year institution that offers certificates and associates degrees</td>
<td>Private 2-4 year institution that offers certificates and associates degrees</td>
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<tr>
<td>Undergraduate Total Population</td>
<td>20,000 - 30,000 students</td>
<td>20-30,000 students</td>
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<tr>
<td>Annual Tuition Cost</td>
<td>$2,500 - $3,500&lt;sup&gt;1&lt;/sup&gt;</td>
<td>$15,000 - $18,000&lt;sup&gt;2&lt;/sup&gt;</td>
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<tr>
<td>Accreditation Status</td>
<td>Accredited</td>
<td>Accredited</td>
</tr>
<tr>
<td>Average Student-to-Faculty Ratio</td>
<td>35 to 1</td>
<td>30 to 1</td>
</tr>
</tbody>
</table>

<sup>1</sup> In-state  
<sup>2</sup> In-state and out-of-state same price
erogeneity in these institutional types, particularly in the for-profit sector. Also, only telephone conversations were used to collect admissions information (though of course we are aware that students obtain institutional information through numerous other sources, to include brochures, social media, Web sites, campus tours, personal contacts, etc. Another limitation is researcher bias. Future quantitative and qualitative research involving larger samples of colleges will enhance the data set.

RESULTS
Two areas that emerged as shaping the admissions profile of each institution were customer service and breadth of information provided. Customer service was rated according to how each institution treated the mystery shopper and the ease with which she was able to access information. Breadth of information was evaluated on the basis of what information was provided by admissions representatives.

Customer Service
Community Colleges
The mystery shopper had to make numerous attempts to contact admissions representatives at the community colleges. When she finally reached one representative and asked about the school’s business program, she was told, “What do you mean ‘our business program?’ Any general information about a program is located on the school Web site.” All but one community college representative referred the researcher to the institution’s Web site; none provided a web address.

No community college representative asked for the mystery shopper’s name or contact information. When she asked if she could speak with a current student, one community college representative replied, “No, we don’t just have students you can talk to. You should come in for an orientation after you enroll.” Another representative said, “You really might want to call the specific department that will answer all these questions.” The researcher called the department to follow up but again was referred to a Web site. A representative at another community college responded to every question by restating the question. For example, when the mystery shopper asked, “What would be required for applying?” the representative replied, “What do you mean ‘what would be required for applying?’” When the mystery shopper explained that this would be her first time to enroll, the representative replied, “It really would be a good idea for you to go to the Web site and see what it says regarding new students.”

Because of the frequency with which community college representatives referred the mystery shopper to the institutions’ Web sites, the researchers did consult the Web sites. Each included sections designated for prospective students. Information—particularly that pertaining to financial aid, enrollment, and fees—was well-organized and far more detailed than what was provided by phone. For example, four community college Web sites had major topics (e.g., enrollment, fees, financial aid, and program information) with clearly labeled links. Many Web sites also had a FAQs section that included some of the questions the mystery shopper had asked on the phone. One community college Web site detailed in clear and readily understandable language the exact steps required to apply for financial aid. Each of the Web sites provided information about how to apply, receive aid, and begin taking courses within the business program, even though far less information had been provided via phone.

For-Profit Colleges
For-profit institutions’ customer service was very different. The first several minutes of each conversation were re-directed toward the mystery shopper—e.g., what was her name, where did she live, what did she wish to study, and how could the institution meet her needs. One representative asked, “What are your passions and goals?” Another inquired, “What are your dreams and aspirations, and ultimately, what would you like to do?” Both of these questions were asked after the researcher asked for a description of the school’s business program. Four of five for-profit institutions’ representatives asked, “What made you call us today?”

At four of five for-profit institution, the mystery shopper spoke with the same representative for the duration of the call. Four for-profit institutions’ representatives answered the call on the first ring. Of particular interest was the way in which most questions were directed back to the mystery shopper’s reason for furthering her education. Representatives of three of five for-profit institutions asked the researcher more questions than she asked them. At several points, all for-profit college representatives
tried to steer the conversation. One respondent stated, “We know why students call us, and they have good reasons for doing so. Let me tell you about what we have to offer.” The representatives who encouraged the mystery shopper to visit the campus were adamant about her doing so quickly. One said, “It would be great if you could come and meet with us tomorrow.” Two suggested a time to visit the campus the next day.

We examined for-profit colleges’ Web sites in order to compare them to those of the community colleges we had examined but found that information—particularly that regarding cost and financial aid—was not readily visible. It took considerably more time to find basic institutional information on the for-profit colleges’ Web sites than it had on the community colleges’ Web sites. Most of the main pages were simple, featuring images of students and a section where a prospective student could provide contact information for follow-up by telephone. Whereas community colleges’ Web sites included specific links to information about financial aid, many for-profit colleges’ Web sites instructed students to call for more information about financial aid. When the researcher clicked the link on one for-profit college’s Web site to access more information about financial aid, a “see if you qualify for financial aid” cartoon advertisement popped up. The most readily available information on each for-profit college’s Web site was the institution’s main telephone number. Aspirational images and urgent messages were prominently displayed on the Web sites. For example, four Web sites featured pictures of smiling students of color in classrooms or at various job settings. Many of the Web sites urged students to “call right away and make their goals a reality.” The Web sites did not seem to be geared toward current students but rather toward prospective students.

**Breadth of Information**

**Community Colleges**

Although one of the five community colleges provided a flat rate for the cost of education, the community college admissions counselors knew very little about any particular degree or concentration. When discussing financial aid, four of the five community college representatives did not answer the question but instead told the mystery shopper, “The rate can be found on our Web site.” Only one community college representative provided a specific cost per credit. She also said, “At this time, we don’t have any scholarships, but maybe you should still go to the Web site and see.” By way of follow-up, she said, “Scholarships are determined once you apply.” This particular representative was the most forthcoming about overall admissions and provided some specific information—for example, “If you are just eighteen and over, you can apply for our next available term, which is the fall semester.” Another community college representative told the mystery shopper, “At this time, we are not sure if we will have space for students to enroll. The sooner you apply, the better, because we fill up quickly, and it’s possible you won’t have a space.” When answering questions about post-graduation job prospects, the one community college representative who stayed on the phone long enough to answer this question said, “It’s kind of a difficult question. It kind of just depends on the person.” When the mystery shopper asked if numbers on job placement were available, the representative responded, “Well, if you want, I can forward you to our office of institutional effectiveness; however, I do not personally know this information.”

**For-Profit Institutions**

For-profit institutions’ representatives were eager to share that numerous academic counselors were available to help the mystery shopper transition to their school and also find a job. Some for-profit college representatives compared their institutions’ capabilities to those of community colleges, citing their own capabilities as superior. One representative said, “Most students are happy with what we have to offer and feel we’re their best choice.” Another said, “Well, with community colleges, you are going to find that they are hard to get into because they don’t have enough space. I am sure we would be a better fit for you.” Again, some for-profit college representatives invited the mystery shopper to visit the campus and speak with a representative in person the next day. In one case, the provision of information depended on whether the researcher was willing to visit campus: “If you come in to the school we will be able to talk to you more about your financial aid,” one representative said.

When queried about employment opportunities after graduation, the for-profit college representatives replied not by citing statistics (as the researchers had hoped they
would) but with affirmations such as “Sure, we know for most of our students, getting a job is really important.” Another said, “Yes, we really want to make sure you are ready for the workforce.” Still another said, “It sounds like kick-starting your career is really important to you.” The representatives thus acknowledged the caller’s job concerns but did not provide institutional data about real employment outcomes. One representative said the mystery shopper might be provided with employment data if she visited campus.

**DISCUSSION**

The results of our study expand existing conceptions of college choice and of the search process, in particular. Our results highlight the necessity of a greater emphasis on how institutions communicate with prospective students. Two themes are that for-profit college representatives seem friendlier and more engaging but in fact may be less forthcoming about pertinent institutional information. Community college representatives provide limited information via telephone, but ample information is available on the institutions’ Web sites.

**Breadth of Information**

Insofar as cost is a key component of any college choice model, one wonders why the institutions in the sample do not provide more extensive information about their attendance costs. On the one hand, for-profit colleges are eager to influence students to enroll quickly. This might be explained by these institutions’ strong sales orientation. On the other hand, community college admissions counselors are reluctant to provide much information and seem uncertain as to how best to direct the prospective student to the appropriate information source. Because the institutions’ admissions culture and practices influence how information is disseminated, financial information may be less readily available, depending on how much it is valued in the admissions culture. One concern that this theme raises is consumer protection: How transparent about financial aid and post-graduation employment should institutions be, independent of whether a prospective student inquires specifically about either? Neither the community college nor the for-profit institutions’ representatives volunteered financial or employment information unless prompted by a question to do so; even in response to specific inquiries, some provided no information.

Most college choice models presuppose that students gather information and then make their enrollment decisions; however, our study suggests a loophole: A prospective student may choose to enroll at a particular institution on the basis either of which seems the most receptive or of which provides the clearest information during the search process. In either case, a student’s decision may say more about what information the institution provides and how it provides it than about specific personal factors and preferences that influence choice.

**Customer Service**

Customer service in part reflects institutional culture. For-profit colleges cater to prospective students’ needs for information in large part because they need to be profitable. This is confirmed by the number of times representatives discussed the needs of students and how the institution could be of service. In contrast, data indicate that community college representatives were inflexible in responding to all of the questions the mystery shopper asked and typically referred her to another source of information. So which information does a prospective student use in her decision-making process? Whether prospective students call institutions or only utilize their Web sites to collect information may dramatically shape their enrollment decisions. Ideally, an institution should provide clear and helpful answers to all student inquiries, regardless of whether they are made by telephone or via online search.

Both types of institutions present unique strengths and obstacles to the search stage of the college choice process. The mystery shopper had great difficulty eliciting informative responses from community college admissions counselors. Overall, community college representatives provided brief verbal responses whereas the information provided on their institutions’ Web sites was much more detailed. In contrast, the mystery shopper had extensive conversations with for-profit colleges’ representatives—as long as the conversations pertained to “hopes and dreams.” It is unclear whether community colleges and for-profit institutions do not want to provide detailed information or whether their communication protocols simply fail to incorporate it. This study is not intended to
impute institutional motives or intentions; nevertheless, its results raise useful questions, to include "how do Web sites change the nature of accessibility to information?" Particular benefits conveyed by Web sites as they are utilized during prospective students' search stage are the vast quantity of information they provide and the ease with which information can be gathered from them. However, a potential pitfall relates to some prospective students' lack of access to Internet resources. For-profit college Web sites proved difficult to navigate, with financial information particularly difficult to find.

CONCLUSION

For-profit and community colleges' distinctive admissions cultures are changing the nature of college access. It will be important for researchers to further investigate these institutions' practices in order to better document and understand these changes. Although our initial intent was to engage admissions counselors via telephone, we found that community and for-profit colleges' Web sites are significant additional pieces of the college-search puzzle. It is important to understand the specific college-search behaviors of prospective for-profit and community college students, particularly as those behaviors (and their results) affect their ultimate enrollment decisions. Finally, we would note that the present study focuses on institutions—not prospective students—as the unit of analysis. Our hope is that our findings regarding these institutions' admissions practices will inform future scholarship about the enrollment choices of prospective for-profit and community college students.

REFERENCES


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How Hollywood Movies Influence International Students to Study in the United States

This study investigates how international undergraduate students perceive U.S. universities as a result of their portrayals in movies that feature higher education in the plot. The study also analyzes whether international students are more or less likely to attend U.S. universities as a result of U.S. institutions’ portrayals in movies. The qualitative research method of focus group interviewing was used to understand international students’ perceptions of U.S. universities. Recorded transcripts reveal that international students perceive U.S. universities as offering freedom, limited parental control, fun, parties, and an academic structure that incorporates the student’s voice. The findings of this research will guide admissions officers as they strive to recruit and communicate to international students the merits and the realities of studying at a college in the United States.
As of November 2012, 764,495 international students were enrolled at colleges and universities in the United States—a 5.7 percent increase from 2011 (McMurtrie 2012). China, India, South Korea, Canada, Taiwan, Japan, Saudi Arabia, Mexico, Vietnam, and Turkey are the top ten countries of origin of international students enrolled at U.S. universities (Institute of International Education 2010). International students benefit from studying in the United States: Doing so offers them greater work-related opportunities as well as the ability to immerse themselves in the English language, promote their understanding of culture, improve their interpersonal skills, and foster their self-identity (Trilokekar and Rasmi 2011). Often, international students return home with an increased positive attitude toward the United States; this can lead to future business relationships with U.S. companies (Institute of International Education 2010).

Higher education continues to be one of the nation’s top service-sector exports (Institute of International Education 2010), contributing nearly $21.8 billion to the U.S. economy (McMurtrie 2012). Domestic students also benefit from the presence of international students on U.S. campuses, as, for example, from increased diversity, which exposes them to other cultures (McMurtrie 2012), prepares them to work in a global society, and supports their development of friendships and networks that are worldwide (Nikias 2008). Studying abroad benefits international as well as domestic students. Blurring academic boundaries is key to “innovation and economic growth” because both elements “lie in the freest possible movement of people and ideas—on campus and beyond” (Wildavsky 2011). Alan Goodman, president and CEO of the Institute of International Education (2010), elaborates: “Active engagement between U.S. and international students in American classrooms provides students with valuable skills that will enable them to collaborate across cultures and borders to address shared global challenges in the years ahead.”

With more than 3,100 baccalaureate-granting institutions in the United States, each with its own “unique purpose, history, student body, and faculty” (Nafukho and Burnett 2002), international students seek information before deciding whether and where to study abroad. Previous research suggests that social influencers play pivotal roles in international students’ decisions to participate in study abroad programs. Family, peers, and institutional advisors are the three most persuasive social influencers (Trilokekar and Rasmi 2011).

In addition to the influence of family, peers, and institutional advisors, another entity that has the ability to influence international students’ awareness of study abroad programs is the mass media, including television, the Internet, and movies (Arenofsky 2002). Movies are the most
persuasive communicators about U.S. higher education because they require intentional engagement; the viewer’s attention is dedicated solely to the film on the silver screen (Vivian 2003). A movie’s plot has the ability to shape individuals’ thinking. Gerbner (1996) explains, “[M]ost of what we know, or think we know, we have never personally experienced.” As a result, movies “reveal how things work, describe what things are, and tell us what to do about them” (Gerbner 1996). Movies have the ability to blur the boundaries between “real” and “reel” reality. Certainly, they can offer a “distorted version of the truth” (Arenofsky 2002).

For example, viewers of the movie “Dead Man on Campus” thought that Hollywood was communicating university policy. The movie is about two roommates, Josh and Cooper, who party to the detriment of their studies. Their grades plummet. Cursing their fate, they strike up a conversation with an inebriated alumnus at a local bar. The alumnus mentions an obscure campus policy that awards a 4.0 grade point average to the roommate of any student who commits suicide. Fearful that their poor grades may result in their expulsion, Josh and Cooper begin to search for a student who is on the brink of committing suicide. Rather than try to improve their academic performance, Josh and Cooper desperately seek a suicidal roommate. A sociology professor surveyed students at Skidmore College and at the State University of New York (SUNY) at New Paltz to determine the effect of the film on enrolled college students (Reisberg 1998). Approximately half of the 82 Skidmore students surveyed believed that their college had such a policy, and four out of five thought that at least some other colleges did as well; approximately 125 of the 150 SUNY New Paltz students surveyed believed the so-called policy was true, and all but 15 thought it was true at other colleges. Given that most students may think that what they view on the silver screen is reality, is it possible that parents of these students also believe that Hollywood communicates facts? At Alfred University, a student hanged himself in his on-campus suite. The mother of one of his roommates called the president, dean, and provost demanding that her son be given a 4.0 (Reisberg 1998).

Because this study investigates international undergraduate students’ perception of and propensity to attend U.S. universities on the basis of the universities’ portrayals in movies produced by Hollywood, it uses the conceptual framework of Hossler and Gallagher’s (1987) three-stage model of college choice, the theoretical framework of Cultivation Theory, the research perspective of interpretive interactionism, and the research method of focus group interviewing. Recorded transcripts from each focus group provide data.

The three-stage model of college choice explores students’ plans for education after they graduate from high school; Cultivation Theory examines the effect of movie messages and how one’s reality is defined; interpretive interactionism identifies what meanings are evident in the data; and focus group interviewing aids understanding of the attitudes and experiences of participants. Focus group interviewing also encourages participants to speak freely, creates a “synergistic group effect,” and promotes interaction.

Higher education administrators and faculty should care deeply about what movies communicate about the profession and its institutions. Regardless of their accuracy, movies serve as a “major information source” (Duncan, Nolan and Wood 2002). Advocates of higher education cannot afford to overlook or downplay the influence of cinema; after all, cinema has the ability to communicate ideas, customs, traditions, behaviors, and meaning. Educators must be aware of and pay attention to movies because movies teach. Movies provide students with “access to a world of experience, information, and attitudes far wider than ever before possible” (McClure 1993).

**PERVASIVENESS OF U.S. MOVIES INTERNATIONALLY**

Traditionally, U.S. movies have dominated the silver screen around the globe: “Hollywood has always been an international business” (The Economist 2011). The majority of foreign movie sales are held and controlled by U.S. production and entertainment companies. In fact, the three largest movie empires—Time Warner, Disney, and News Corporation—are U.S.-based. These companies use entertainment to communicate “tastes, values, mores, history, culture, and language around the world” (McPhail 2010).

It is not unusual for U.S.-produced films to earn more at the box office internationally than domestically. For example, in 2010, the number of movie ticket sales in Russia exceeded the country’s population (The Economist 2011). In 2011, ticket sales in the United States and Canada totaled $10.2 billion, compared to $22.4 billion internationally (Verrier 2012). Some of the highest international box office
sales were for “Independence Day” ($503 million), “Jurassic Park” ($563 million), and “Titanic” ($1 billion) (Prince 2001). Eco-fantasy “Avatar,” released in 2009, broke the record set by “Titanic” and grossed $2 billion in ticket sales outside North America (The Economist 2011). Released in May 2012, the U.S.-produced movie “The Avengers” premiered internationally in Rome, Beijing, London, and Moscow. Foreign moviegoers were particularly attracted to the movie’s special effects and action (Kaufman 2012).

According to McPhail (2010), Hollywood entertainment empires succeed internationally for three reasons: one, the primary language is English, the dominant language of the production and entertainment empires; two, the production and entertainment empires have access to a wealth of monetary resources that enable them to create multimillion dollar movies; and three, the most talented actors, directors, producers, and writers hail from the United States.

International film audiences flock to American-produced movies. In Europe for example, American movies are more than mere entertainment: They are perceived as a cultural experience. According to one author (English 2010), European children learn English by quoting movies. The Vietnamese are experiencing American movies in droves because of their emotional impact: “I can feel the film, not just see it,” explains Nguyen Kim Ta (Hookway and Nguyen 2007). China’s box office is also pulling in billions from the Hollywood-produced movies “2012” and “Avatar.” Chinese film audiences find these movies gratifying because they incorporate Chinese elements (Yuankai 2011). Similarly, “Mulan” and “Kung Fu Panda” also were hits in China because they allowed “Western audiences to experience Oriental civilization in tandem with their familiar ‘American Dream’” (Yuankai 2011).

INFLUENCES ON INTERNATIONAL STUDENTS TO STUDY IN THE UNITED STATES

For many international students, the United States dominates the global higher education market in terms of quality (Adenekan 2007). Family, peers, and institutional advisors provide information and have the greatest influence on students to study in the United States because they constitute students’ social support (Pascarella and Terenzini 1991; Trilokekar and Rasmi 2011). The media—specifically, Hollywood movies—also may influence a student’s decision to study abroad. According to Don Olcott, CEO of The Observatory on Borderless Higher Education (OBHE), “The massive sports facilities, on-campus accommodations, and fraternities that U.S. education seems to provide offer an archetype for student living [of the sort] that international students have seen in movies” (Adenekan 2007).

Do movies really have such power? Audience members can become mesmerized by the characters on the screen. “Sex and the City” sparked an increase in sales of Manolo Blahnik stilettos, Fendi baguettes, and signature nameplate necklaces (Ferla 2010). Matt Damon’s character in Good Will Hunting resonated with the working-class as he “…yaks about Dunkin’ Donuts…” (Govani 1999). Similarly, James Bond movies promote sales of Rolex watches, Brioni suites, and BMW sedans (Govani 1999). Forensic science programs have surged in popularity as a result of the prime-time television program “CSI” (Houck 2006). “National Lampoon’s Animal House” is credited with revitalizing fraternities and toga parties (Konigsberg 1992). Movies offer a looking-glass for many international students considering whether to study abroad. They provide one way in which international students learn to “read, write, listen, speak, and make meaning of their lives” (Alex 1998). Students expand their “knowledge, habits, skills, and concept development” (Kirkpatrick, Brown, Atkins and Vance 2001) through film. Movies inform audiences’ expectations about the realities of the world (Griffin 1994).

LITERATURE REVIEW

Conceptual Framework

Hossler and Gallagher’s (1987) three-stage model of college choice is used in this study to understand international students’ decision-making processes related to studying in their home country or abroad. The first phase of the model is predisposition, which “refers to the plans students develop for education or work after they graduate from high school” (Hossler, Schmit and Vesper 1999). This phase also includes influencers such as family, peers, and academics. Search, the second phase of the college choice model, involves students’ exploration of various college options and their gathering of information about each college’s characteristics. It is in the third and final phase, choice, that a student decides which college to attend (Hossler, Schmit and Vesper 1999). Because the present study examines in-
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ternational students’ likelihood of studying in the United States on the basis of portrayals of U.S. higher education in Hollywood movies, search is the most relevant stage for examination. It is during the search phase that international students solicit and receive information about U.S. universities. This stage addresses the question “How do international students learn about universities in the United States?” (Hossler, Schmit and Vesper 1999).

**Theoretical Framework**

Developed originally to understand the effects of television violence, George Gerbner’s Cultivation Theory has been applied to all types of programming—including movies—to understand the effect of media messages and how one’s reality is defined (Cragan and Shields 1998). Cultivation Theory suggests that watching movies over a period of time will “cultivate” the audience’s perception of reality. Even the smallest amount of film viewing can have an effect on one’s reality because the viewer is exposed to the message movies communicate through the actors’ dialogue and through images. A communicative interaction occurs when viewers respond to the movie’s message. Thus, watching a movie is considered “interacting.” The entertainment industry controls audiences’ reception of cultural stories (i.e., movies) (Shanahan and Morgan 1999).

**RESEARCH PERSPECTIVE**

The interpretivist process provides the perspective for this research project. Interpretation enables the researcher to untangle webs of meaning that develop when participants are exposed to and interact with different people, places, and ideas. Interpretation answers the question “What are the meanings in the data?” (Gay and Airasian 2000). Geertz (1973) contends that interpretation “illuminates the meanings and conceptual structures that organize a subject’s experience.” More precisely, interpretive interactionism is applied in this research study because it combines symbolic interactionism and interpretive inquiry (Blumer 1969; Denzin 2001). The combination enables thorough understanding of thought and symbol.

Interpretive interactionism is critical to the construction of reality: Even as humans do not have direct access to reality (Denzin 2001; Mills 1963), so international students find the United States beyond their scope of cultural reality. According to Denzin (2001), “Reality...is mediated by symbolic representations, by narrative texts, and by televisual and cinematic structures that stand between the person and the so-called real world.”

**METHODOLOGY**

The research question was as follows: How do international students perceive U.S. universities in light of their portrayals in Hollywood movies that feature higher education in the plot? In addition, this study investigated whether international students are more or less likely to attend U.S. universities because of their portrayals in such movies.

The qualitative research method used to answer the proposed research question was focus group interviewing. Focus group interviewing was selected for several reasons: First, this method encourages subjects to speak freely, completely, and without criticism of the “behaviors, attitudes, and opinions they possess” (Berg 2001). Second, focus group interviewing creates a “synergistic group effect” that lends to greater ideas, analysis, and discussion about the given topic (Berg 2001). Third, and most important, this method is based upon interaction: “Meaning and answers arising during focus group interviews are socially constructed rather than individually created” (Berg 2001). Focus group interviewing was particularly useful because the process of selecting an institution of higher learning—like the focus group process—occurs socially (i.e., symbolic interactionism).

As the focus group moderator, the researcher explained to the undergraduate participants the research project as well as how the focus groups would operate. Participants were told that their responses would be recorded for subsequent analysis by the researcher. The researcher asked the participants to write down the titles of Hollywood movies they recalled that featured higher education in the movies’ plots as well as movies they had viewed. (The researcher did not choose the movies and then ask the participants to view them because this might have limited the number of movies the participants recalled.) In total, the research participants recalled 23 Hollywood movies they recalled that featured higher education in the movies’ plots as well as movies they had viewed. (The researcher did not choose the movies and then ask the participants to view them because this might have limited the number of movies the participants recalled.) In total, the research participants recalled 23 Hollywood movies that portrayed U.S. higher education. The most commonly recalled movies included “Good Will Hunting,” released by Miramax in 1997 (12); “American Pie,” released by Universal Pictures in 1999 (32); “Legally Blonde,” released by Metro-Goldwyn-Mayer in 2001 (10); “Accepted,” released by Universal Pictures in 2006 (10); and “The Social Net-
work,” released by Columbia Pictures in 2010 (15). (See Table 1.) The movies were discussed and analyzed to identify their respective portrayals of U.S. higher education. To elicit discussion about Hollywood movies’ portrayal of U.S. universities and international students’ consequent propensity to study in the United States, the researcher crafted a series of discussion questions (see below). (This is a common practice because focus groups “provide a means for assessing intentionally created conversations about research topics” [Berg 2001].)

- How did you determine that you would continue your education after high school?
- Who and what influenced your college choice?
- Did American movies offer insight about education in the United States? If so, which movies do you recall?
- How is higher education portrayed in these movies?
- Explain if you think movies’ portrayals accurately reflect higher education in the United States.
- Explain whether you were more likely to study in the United States because of higher education’s portrayals in Hollywood movies.

The number of research participants per focus group was limited to between eight and ten, for a total of fourteen focus groups (Moriarty, Mitchell and Wells 2009). The focus groups were conducted on a university campus in a private conference room with round-table seating. Each focus group met twice for one hour. The final data set included 139 undergraduate students.

Participants

International undergraduate participants in this study were enrolled at the largest public, four-year university in St. Louis, Missouri. (See Table 2, on page 22, for a listing of the students’ countries of origin and the number of participants from each.) The majority of participants were from China and South Korea. The majority of the students were not permanent residents of the United States but rather had an F-1 student visa.

ANALYSIS AND RESULTS

The researcher analyzed the recorded discussions and identified concepts the undergraduate participants deemed true.

<table>
<thead>
<tr>
<th>Hollywood Movie</th>
<th># of Students Who Recalled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accepted</td>
<td>10</td>
</tr>
<tr>
<td>American Pie</td>
<td>32</td>
</tr>
<tr>
<td>Back to School</td>
<td>2</td>
</tr>
<tr>
<td>A Beautiful Mind</td>
<td>5</td>
</tr>
<tr>
<td>Dead Man on Campus</td>
<td>3</td>
</tr>
<tr>
<td>Dead Poet’s Society</td>
<td>2</td>
</tr>
<tr>
<td>Good Will Hunting</td>
<td>12</td>
</tr>
<tr>
<td>Higher Learning</td>
<td>2</td>
</tr>
<tr>
<td>How High</td>
<td>3</td>
</tr>
<tr>
<td>Legally Blonde</td>
<td>10</td>
</tr>
<tr>
<td>National Lampoon’s Animal House</td>
<td>9</td>
</tr>
<tr>
<td>Old School</td>
<td>3</td>
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<tr>
<td>Road Trip</td>
<td>3</td>
</tr>
<tr>
<td>Revenge of the Nerds</td>
<td>2</td>
</tr>
<tr>
<td>Rudy</td>
<td>5</td>
</tr>
<tr>
<td>School Daze</td>
<td>2</td>
</tr>
<tr>
<td>Transformers</td>
<td>2</td>
</tr>
<tr>
<td>The Graduate</td>
<td>4</td>
</tr>
<tr>
<td>The Nutty Professor</td>
<td>2</td>
</tr>
<tr>
<td>The Paper Chase</td>
<td>2</td>
</tr>
<tr>
<td>The Social Network</td>
<td>15</td>
</tr>
<tr>
<td>Twenty-one (21)</td>
<td>7</td>
</tr>
<tr>
<td>Water Boy</td>
<td>2</td>
</tr>
<tr>
<td>Total: 23</td>
<td>Total: 139</td>
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</tbody>
</table>
studying may be limited to earning a degree and learning to read and to speak English, several additional factors contributed to students’ coming to the United States: these included broadening their world view (e.g., learning about American culture), experiencing freedom, having fun, playing sports, meeting new people, increasing job opportunities, being accepted, and escaping hardship. “I came to the United States for education. Universities in the United States have the best reputation in the world. It provides me a good environment to pursue knowledge. In terms of major, which is finance, it’s better for me to develop my career in the U.S. in the beginning because the U.S. offers a good platform in terms of more job opportunities and wider insight,” declared a Chinese student.

How did you determine that you would continue your education after high school?

One hundred and twenty-five of the research participants (90%) agreed that parental influence was their primary reason for continuing their education after high school. The three other most commonly cited reasons were family and societal expectation to earn a college degree, personal desire to earn a college degree, and better job opportunities as a result of earning a college degree. A student from China said he did not make the decision to study in the United States; rather, his family decided for him: “I was forced to come to America due to the culture and the education.” A student from Ethiopia made a similar comment: “My mom wanted me to come to the U.S. and get an

<table>
<thead>
<tr>
<th>Country</th>
<th>Students (n)</th>
<th>Country</th>
<th>Students (n)</th>
</tr>
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<tbody>
<tr>
<td>Argentina</td>
<td>8</td>
<td>Mexico</td>
<td>1</td>
</tr>
<tr>
<td>Aruba</td>
<td>1</td>
<td>Montenegro</td>
<td>1</td>
</tr>
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<td>Belgium</td>
<td>1</td>
<td>Netherlands</td>
<td>2</td>
</tr>
<tr>
<td>Bosina (former Yugoslavia)</td>
<td>2</td>
<td>New Guinea</td>
<td>1</td>
</tr>
<tr>
<td>Brazil</td>
<td>3</td>
<td>Nigeria</td>
<td>4</td>
</tr>
<tr>
<td>Canada</td>
<td>1</td>
<td>Pakistan</td>
<td>3</td>
</tr>
<tr>
<td>China</td>
<td>37</td>
<td>Panama</td>
<td>1</td>
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<tr>
<td>Dominican Republic</td>
<td>1</td>
<td>Peru</td>
<td>1</td>
</tr>
<tr>
<td>Ecuador</td>
<td>1</td>
<td>Puerto Rico</td>
<td>3</td>
</tr>
<tr>
<td>England</td>
<td>2</td>
<td>Romania</td>
<td>1</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>3</td>
<td>Saint Kitts</td>
<td>1</td>
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<tr>
<td>France</td>
<td>5</td>
<td>Saudi Arabia</td>
<td>5</td>
</tr>
<tr>
<td>Germany</td>
<td>3</td>
<td>Senegal</td>
<td>2</td>
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<tr>
<td>Greece</td>
<td>1</td>
<td>Slovakia</td>
<td>1</td>
</tr>
<tr>
<td>Guatemala</td>
<td>1</td>
<td>South Africa</td>
<td>1</td>
</tr>
<tr>
<td>India</td>
<td>3</td>
<td>South Korea</td>
<td>18</td>
</tr>
<tr>
<td>Ireland</td>
<td>1</td>
<td>Tanzania</td>
<td>1</td>
</tr>
<tr>
<td>Israel</td>
<td>1</td>
<td>Thailand</td>
<td>1</td>
</tr>
<tr>
<td>Italy</td>
<td>2</td>
<td>Uganda</td>
<td>1</td>
</tr>
<tr>
<td>Jamaica</td>
<td>1</td>
<td>United Arab Emirates</td>
<td>1</td>
</tr>
<tr>
<td>Japan</td>
<td>4</td>
<td>United Kingdom</td>
<td>1</td>
</tr>
<tr>
<td>Kenya</td>
<td>1</td>
<td>Vietnam</td>
<td>4</td>
</tr>
<tr>
<td>Mauritania</td>
<td>1</td>
<td>Total:</td>
<td>139</td>
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education because this way I would be more successful.”
“Education is very important in my family and has been for years. You could say I did not have much of an option but to continue my studies in the United States,” said a student from Ireland.

Who and what influenced your college choice?
Similarly, 130 research participants (94%) contended that parents and family (including siblings and extended family members) influenced their decisions to study in the United States. “I had to go to college in the United States, no choice! My parents are strict on education,” declared a student from China. A student from Nigeria said, “My father influenced me. He always pushed me to try my best and always try to improve my life.” A student from Korea said, “My sister studied abroad and loved it, so I decided to do the same. After she graduated, she got a better job with an American degree back in Korea. I hope to do the same!”

Did American movies offer insight about education in the United States? If so, which movies do you recall?
Regardless of their accuracy, movies’ portrayals of U.S. higher education in the United States did have some influence. A student from Puerto Rico said, “The movies communicate to me that everyone has an opportunity with higher education in the United States.” “I learned from movies about the university environment, things like communication between the student and the professor and students’ freedom to ask any questions to the professor; this does not happen in my country,” shared a student from Mauritania. A student from Brazil said he learned “how American students study and [about] the diverse cultures on college campuses.” “I am learning about the U.S. education system from movies. I think, though, some of the movies show exaggerations because...most students are serious about their education,” said a student from Panama. A student from China may have said it best: “I loved watching the U.S. movies because I had no idea what to expect before I came to the United States. The movies help me better understand what American colleges are about.”

The research participants recalled 23 movies that portrayed higher education in the United States. “Good Will Hunting” (1997) focuses on a 20-year-old janitor at the Massachusetts Institute of Technology who demonstrates his genius when he solves a graduate-level math problem left on the chalkboard after the professor and the students depart for the day. “American Pie” (1999) is about four buddies who pledge to lose their virginity before they head off to college. One of the young men (almost) loses his virginity to an exchange student from Czechoslovakia. The sequel, “American Pie 2” (2001), traces the friends’ adventures after their first year of college. In “Legally Blonde” (2001), Elle Woods changes her major from fashion merchandising to law so she can be closer to her ex-boyfriend, who has been accepted to Harvard Law School. “Accepted” (2006) is about a high school student who makes fake IDs instead of studying. When his deception results in his receipt of rejection letters from all of the universities to which he applied, he creates a fictitious university. “The Social Network” (2010), based on a true story, focuses on a Harvard student who creates the largest social networking site after learning that his one-night creation, FaceMash, generated substantial Internet traffic.

How is higher education portrayed in these movies?
The research revealed that international students perceive U.S. universities as offering freedom, limited parental control, fun, parties, and a format that incorporates the student’s voice. A student from England said, “‘American Pie’ (1999) depicted U.S. education as fun while incorporating studies; a good mix of fun and school.” “In the movies I watched, students look like free people—people who are enjoying life and having parties,” observed a student from South Korea. “The movies showed me that I can have fun while taking my next steps in life,” explained a student from Saudi Arabia. A student from China commented about higher education appealing to student interests: “The movies show college education in the United States which caters to a student’s interests—interests needed for their future career choice. Students can learn while also having lots of fun. Good balance.” “I see the value in U.S. higher education because the movies illustrate that U.S. students have an open attitude toward other people,” said a student from China. Another student from China said, similarly, “The U.S. school system is so diverse and accepting. In addition, students have lots of freedom to decide what they want to do and learn in school. There are so many activities and events for students every day.” With regard to a...
format that incorporates students’ voices, a student from Nigeria said, “The U.S. school is experiential, meaning I learn in the classroom from others’ experiences, and they learn from mine, too.” A student from Senegal said, “The movies illustrate to me that I should not become a product of my environment, but rather, I can use my voice to make my college experience even better.” Although many of the international students shared that they felt they could express their thoughts in the classroom and in front of their professors, a few students contended that some professors focused first on their own aspirations. A student from Korea explained, “College teaches you skills to succeed in life. However, it can be hard to learn those skills if your professor is cold and only focuses on his own fame and acclaim.”

Explain if you think movies’ portrayals accurately reflect higher education in the United States.

A point of redundancy among the international students was that movies provide a degree of exaggerated reality. One research participant explained, “Movies about American college life exaggerate somewhat, but these movies are reflective of issues on college campuses.” One topic is not depicted in the movies: studying. “It takes a lot of effort to do well in classes, and the movies don’t seem to show this,” emphasized a student from the Netherlands. A student from Korea cited “Good Will Hunting” (1997): “The main character, who is unable to follow the rules, is offered support. Universities in the United States always try and help students.” A student from China said, “At times, movies are accurate. In my opinion, they offer a lesson to learn.” “The most accurate movie portrayal of higher education in the U.S. is that everyone is given an opportunity,” declared a student from Puerto Rico.

Explain whether you were more likely to study in the United States because of higher education’s portrayals in Hollywood movies.

Ninety-seven of the research participants (70%) acknowledged that their decision to study abroad was influenced by films about higher education produced in the United States. According to a student from Israel, “My decision to study in the United States had something to do with what I saw in the movies. There are so many options in the U.S. and so many opportunities here compared to back home. The sky is the limit!” A student from China also was influenced by Hollywood movies to study in the United States: “I always wanted to come to America since I can remember. American television and movies made me want to travel here and see what it was all about. I wanted to go to New York. University gave me the opportunity to come here affordably. Yes, I think movies influenced my decision to come to the U.S.” A student from Nigeria was not influenced by movies to study abroad but acknowledged “real” portrayals in movies: “No, it’s just pure entertainment for the audiences. There are some real issues addressed, which are true.” A student from Japan commented, “The experience of learning about a different culture and travel is the main reason I came to the U.S., not because of movies.” Another student from Japan said that while movies did not influence her decision to study abroad, her family insisted that she do so. A student from China disagreed with those who were not influenced by movies and declared, “America is the most powerful country. Unlike China, the U.S. movies show more likable opportunity; opportunity brings success!”

ADVERTISING U.S. HIGHER EDUCATION TO INTERNATIONAL STUDENTS

Social influencers are pivotal in international students’ decisions to participate in study abroad programs. In addition to the social influencers of family, peers, and institutional advisors, another entity that has the ability to influence international students’ decisions to study abroad is Hollywood.

Unless an institution of higher learning agrees to a movie deal with Hollywood producers (e.g., “Glory Road” by Walt Disney Studios), it cannot control the message communicated on the silver screen. Nevertheless, it can control advertising initiatives. Traditionally, the primary advertising strategy used by admissions officers has been to mail solicited and unsolicited literature to prospective students (Hossler, Schmit and Vesper 1999). The research participants in this study contend that mailings are not as effective as other advertising strategies. For example, a student from China referred to mailings as “outdated.” A student from South Korea said a mailing is easily “tossed aside.”

The international undergraduate participants said that if admissions officers want to effectively promote their programs to international students, the best strategy is to design the university’s Web site so it features a link on the
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main landing page for international students only. Such a strategy can humanize the search process and define the reality of studying abroad. Such a link would encourage conversation among international students currently studying in the United States and those considering doing so. Participants identified several facets to such a link: First, it should feature a drop-down bar so students could select their country and language of origin. (International students typically feel more comfortable speaking with peers from their own countries.) Second, the link should feature a blog as well as a Skype account so prospective students could chat with students from their native countries (an approach similar to facebook in the United States and Renren in China). A student from China said, “I want an international site broken up into countries/languages so I can enter a chat room, view, comment, share photos and ideas, and ask questions of students from my country who attend the American university. I feel silly asking admissions officers so many questions, so I want to ask a student from my country. These silly questions were a huge deciding factor for me before coming to the U.S. to study.” Another feature would pertain to the application process, which can be daunting. A video with step-by-step instructions in a variety of languages could clarify the details of the application process. A “For International Students” link also might showcase joint programs, scholarships, athletic programs, English classes, campus events, as well as diversity in the form of virtual workshops. A student from South Africa said, “I want to know I will not be the only international student on campus.” Community events might also be featured. A student from South Africa explained, “When I study abroad, I also want to explore the city. I want to visit museums, parks, monuments, cathedrals, and much more.” Finally, the “For International Students” link could feature—both in English and in a variety of other languages—a section for parents. Parents should be able to ask questions of admissions officers and to schedule face-to-face appointments via Skype. In addition, parents should be able to access facts and articles about the benefits of studying at that particular institution.

**DISCUSSION**

International students benefit from studying in the United States. Doing so expands their employment opportunities and provides opportunity for them to immerse themselves in the English language, promote their understanding of U.S. culture, improve their interpersonal skills, and foster self-identity (Trilokekar and Rasmi 2011). During the focus group meetings, the international students spoke of their conviction that studying in the United States was their chance to make their lives richer (not exclusively monetarily) and to advance along a path toward greater self-insight, ability to learn by doing, personal ownership, balance between work and play, expression of their thoughts and feelings, and career mobility—in short, to attain a future that would be bountiful for them and their families—all in a country that embraces cultural diversity and celebrates individual achievement. These are the reasons that many of the parents insisted that their children study in the United States and that family was the dominant social influencer on students’ participation in a study abroad program.

International students have little or no cultural reality about academia in the United States. Thus, they seek information to define the reality. A reality begins to take shape during the search process as students converse with social influencers, surf Web sites, read solicited and unsolicited literature from higher education institutions, and watch images portrayed in the media—specifically, in Hollywood movies.

Our role as educators and admissions officers is to embrace and manipulate the tools (e.g., websites, literature, movies) available to international students when they seek to understand the reality of higher education in the United States. The current research suggests that international students crave an educational experience that will cherish their culture, celebrate their achievements, and offer a future that is not limited by boundaries. Often, these are the very images featured in Hollywood movies.

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About the Author

KRISTY TUCCIARONE, PH.D., is Associate Teaching Professor, Program Manager Certificate in Advertising, and Advising Coordinator at the University of Missouri – St. Louis. She is a board member for Ad Club St. Louis and actively involved with the American Advertising Federation (AAF). Tucciaronne’s research focuses on the portrayals of higher education in film, advertising’s effect on search and college choice, information sought by students on a college’s web site, portrayals of the advertising industry in film and influence on career choice, Hollywood movies influence on international students to study abroad, and benefits of service-learning in an advertising course. Prior to teaching, Tucciaronne was employed with the world’s largest direct marketing agency. Tucciaronne holds a Ph.D. in Educational Leadership and Policy Studies. In 2011, Tucciaronne was honored with the Emerson Excellence in Teaching Award.
In 2009, the U.S. Department of Justice reported that 1,617,478 people were incarcerated in the United States (West 2010). This was equivalent to 504 incarcerated people per 100,000 U.S. residents—the highest incarceration rate in the world. On average, the rate increased 2 percent annually since 2000 and only began to taper off in 2009 (West 2010). With U.S. college enrollment at 21 million in 2010 and with the expectation that enrollment would increase 15 percent between fall 2010 and fall 2020, the number of people with criminal histories applying to college is likely to increase (U.S. Department of Education 2011). An emerging trend is for institutions of higher education (IHEs) to screen applicants with felony convictions by requiring self-disclosure of criminal history (Weissman et al. 2010). This paper summarizes the literature on these policies and presents a study on the outcomes of admissions practices at one IHE. Implications for admissions and student affairs professionals are considered.

LITERATURE REVIEW
Administrators are increasingly concerned about the safety of staff and students. Infamous acts of violence on college campuses—as, for example, at Virginia Polytechnic Institute and State University in 2007 and at Northern Illinois University in 2008—have resulted in the development of new policies and procedures designed to promote a safer campus environment (Hughes, White and Hertz 2008;
Hughes and Wolf (2008). More recent events, such as the January 2011 shooting in Tucson, Arizona, by a former Pima Community College student and the July 2012 movie theater shooting in Aurora, Colorado, by a former University of Colorado at Denver graduate student, may continue to fuel the development of such policies (Patton 2012; Reiss 2011). While it is common knowledge that mental health and not previous criminal history was the common denominator in these notable events, one emerging trend is to use criminal histories as a selective measure in the admissions process. AACRAO reports that 66 percent of 273 IHEs surveyed collect criminal history information, and 35 percent both collect and use criminal history information in the admissions process (Weissman et al. 2010).

ADMISSIONS POLICIES

Several authors have attempted to describe best practices for admissions policies that screen students based on criminal history (Dickerson 2010; Langhauser 2001; Weissman et al. 2010). Many elements are similar: First, applicants are required to indicate any past felony convictions on a general admissions form. Then, applicants are prompted to supply additional information (e.g., court records or an essay) about their convictions. A committee that typically includes representatives from student conduct, police, counseling, legal counsel, admissions, and the faculty reviews all applications and sometimes interviews applicants. Concerned primarily about the types and dates of convictions, court sanctions, evidence of rehabilitation, and evidence of acceptance of
responsibility, the committee makes decisions or recommendations regarding admission; sometimes it imposes conditions of admission or refers applicants to student services. The primary purpose of this review is risk management (Dickerson 2010; Langhauser 2001; Weissman et al. 2010).

Nevertheless, there is no evidence that such practices yield safer campuses. One study indicates that screening applicants through self-disclosure or background checks does not yield safer campuses: Olszewska (2007) compares the campus crime statistics reported under the federal Clery Act of IHEs that “explore undergraduate disciplinary backgrounds” (including criminal history and educational discipline records) with those of IHEs that do not. She concludes that there are no statistically significant differences in the crime rates of IHEs that do and do not screen applicants (Olszewska 2007).

SUPPORTING EX-OFFENDERS

Aside from concerns for campus safety, another reason for reviewing criminal history in the admissions process is the belief that students with felony convictions face a more difficult transition to college than those without convictions (Copenhaver et al. 2007). In a study of four undergraduate college students with felony convictions, Copenhaver et al. (2007) documents that support groups and assistance from campus personnel are needed to help with the transition to college. Student affairs professionals can intervene by reviewing applicants’ admissions applications for risk factors and by referring applicants as appropriate to campus support services. While Weissman et al. (2010) report that some IHEs provide such interventions, there is no published research on a systematic approach to or outcomes of providing special services to ex-offenders who are identified through the general admissions process.

IHEs that do not screen for criminal history provide ex-offenders with access to higher education (Weissman et al. 2010). Education is one of the most important change agents in reducing criminal recidivism (Gates et al. 1999; Matsuyama and Prell 2010; Stevens and Ward 1997). Education also is a means of self-improvement (Hughes 2009). According to AACRAO, many IHEs either do not require disclosure of criminal history (21.5 percent of 273 IHEs surveyed) or do not take any action when criminal information is provided or otherwise obtained (16.5 percent of 273 IHEs surveyed) (Weissman et al. 2010). In the Copenhaver et al. (2007) study, all four participants expressed a sense of fear of or intimidation by students and faculty because of the stigma of being convicted felons. They also expressed feelings of shame and anxiety and their receipt of negative reactions related to disclosing their criminal history to other students and faculty. Additional admissions requirements for applicants with felony convictions may be marginalizing and stigmatizing (Copenhaver et al. 2007).

LEGAL CONSIDERATIONS

Interpretations of the legal implications of special admissions processes are varied. Generally, courts have allowed IHEs to establish and to operate their own admissions processes (Kaplin and Lee 2006; Langhauser 2001). Additionally, no federal or state laws exist that either require IHEs to screen or prohibit IHEs from screening applicants on the basis of criminal history (Dickerson 2010). However, in one notable court case, a judge stated clearly that universities do not have a legal duty to screen applicants with felony convictions: An IHE in New York was not held liable for two murders committed by an admitted student and known ex-felon (Eiseman v. State of New York 1987). In addition, minorities—especially African-American and Hispanic men—are convicted and incarcerated at significantly higher rates than are white men (West 2010); a systematic screening of applicants on the basis of criminal history may result in discriminatory admissions practices (Weissman et al. 2010). Courts also have warned that blanket admissions policies that screen applicants on the basis of criminal history without individual review of cases violate due process rights (ACLU 2011).

Because the higher education community lacks data on the outcomes of special admissions policies, IHEs (especially those that are public) may be unfairly denying admission to applicants with prior felony convictions who otherwise are academically eligible (Langhauser 2001). The reentry of convicted felons into society is difficult because of barriers related to housing, employment, and education; yet education is known to be a pivotal factor in successful reentry and reduced recidivism (Stevens and Ward 1997). Requiring additional admissions procedures for applicants with felony convictions may create an additional barrier to education and to successful reentry (Weissman et al. 2010). Therefore, policies that may prevent people with felony convictions from attaining higher...
education should be assessed to evaluate their effects on campus safety as well as on applicants and students.

**PURPOSE OF THE STUDY**

The purpose of this ex post facto and mixed-method study is to examine the outcomes of special admissions policies for applicants/students with prior felony convictions at one IHE. In order to test the merits of these policies, three factors are examined: the experience of applicants with prior felony convictions during the application process; the results of the screening process; and the experience of admitted students with prior felony convictions.

**METHODOLOGY AND DESIGN**

As a qualitative inquiry, this study seeks to “describe the meaning of experiences of a phenomenon for several individuals” (Creswell 2007). The researcher who conducts a phenomenological study seeks to understand the essence of an experience that is shared by several individuals by identifying and analyzing significant, meaningful statements (Creswell 2007). The researcher in this study reviewed and interpreted written admissions statements from applicants with prior felony convictions to find meaningful themes derived from the shared experience of completing the special admissions procedures.

Quantitative data—namely, descriptive statistics—were collected from admissions files and from university databases to reveal trends about policy violations, demographic information, felony convictions, and other frequencies.

The researcher could not collect updated criminal history information (e.g., criminal background checks) for those students who eventually enrolled at the research institution (RI). Instead, discipline histories were checked. At the RI, if an enrolled student was convicted of a felony, student code of conduct violations would ensue. Therefore, a key assumption is that if one of the enrolled students with prior felony convictions examined in this study re-offended criminally, it would be apparent through his university discipline history.

**POPULATION**

The RI is a large, public, liberal admissions university in the midwest. (“Liberal” is the term administrators use to describe the RI’s admissions requirements of a 2.0 high school GPA and a score of 18 on the ACT for unconditional admission for in-state students, thus distinguishing “liberal” from “open” admissions practices.) Starting in fall 2009, all undergraduate students who applied were required to self-disclose any prior felony convictions on the general admissions application by answering the yes/no question “Have you ever been convicted of a felony?” The RI developed a policy to guide the review of applicants with prior felony convictions. The RI’s chief student conduct administrator chaired a committee comprising the director of counseling, the chief of police, and a non-voting admissions officer that made recommendations to the director of admissions. Between fall 2009 and winter 2011, a total of 54 undergraduate applicants disclosed having prior felony convictions. All (n=54) were included in this study. While some (n=37) had been sentenced to some period of incarceration for their criminal offenses, none was incarcerated at the time of application to the RI.

**DATA COLLECTION PROCEDURE**

RI administrators provided de-identified student admissions applications and supplemental materials to the researcher. Each individual application was delivered as a redacted hard-copy file. The researcher then assigned each file an identifying code that did not link the file to any personally identifiable information of the applicant.

Data collected from these files included the applicant’s age, gender, ethnicity, felony convictions with corresponding conviction dates, written statements, admissions decision information, enrollment status, and disciplinary history. The written statement was a personal essay that the applicant provided to address specifically the details of his criminal conviction(s), court outcomes, rehabilitation, and personal information to explain the affirmative response to the application question regarding convictions.

**DATA ANALYSIS AND CODING PROCEDURES**

First, the number of students with prior felony convictions who had violated any university policy was compared to the total population of students who had violated university policy within the period of study. Other descriptive statistics—namely, frequencies and percentages—were used to compare the population to the RI’s general student population.

Second, the researcher reviewed all available written statements and utilized content analysis coding to un-
understand the applicants’ experience of the RI’s admissions policies. The researcher read and coded the written statements by identifying themes. The codes represented types of factual information and attitudes expressed by the applicants. The first round of coding resulted in 19 individual codes; a second round of coding resulted in the consolidation of several codes. The final set of 16 codes was grouped into four general thematic categories (see Table 3, on page 34). In the text of the original study, the researcher provided a summary description of applicants’ experiences using the identified themes and verbatim significant statements to describe the shared experience.

RESULTS

The researcher obtained the total population of 54 undergraduate admissions applications submitted between fall 2009 and winter 2011 on which the applicants indicated prior felony convictions (PFC). Of the 54 PFC applicants, 47 were recommended for admission, and 34 enrolled as students for at least one quarter. During the 2010–11 academic year, 14,366 undergraduate students enrolled at the RI. (Key demographic data comparing the PFC population to the RI population are displayed in Table 1.) Data collected from the admissions applications and institutional databases regarding admissions decisions and the cumulative GPAs of the enrolled PFC students are displayed in Table 2. The information displayed in the tables contributed to the researcher’s understanding of the results of the special admissions policies.

CONVICTIONS DATA

The 54 PFC applicants were convicted 77 different times between 1984 and 2011. Of those, 32 convictions (42%) occurred between 1984 and 2004; the remaining 44 convictions (57%) occurred between 2005 and 2011 (one applicant [1 percent] did not list a conviction date). Twenty-one applicants were convicted only between 1984 and 2004 (39%), which was more than five years prior to the application date. Only one of those 21 applicants was not recommended for admission because she withdrew her application; the other 20 applicants were recommended for admission. The remaining applicants (n = 33, or 61%) were convicted at least once between 2005 and 2011, which was within five years of the application date. Six of those 33 applicants were not recommended for admission (see Table 2, on page 33).

ACCEPTED STUDENT DATA

The researcher found that 34 of 47 PFC applicants (72%) who were recommended for admission actually enrolled at the RI. (The researcher did not collect data that might explain why the remaining 13 applicants did not enroll at the RI.)

The researcher also found that none of the enrolled PFC students (n = 34) was found responsible for any violation of the student code of conduct, and by assumption, none
was re-convicted between the time of enrollment and the end of the fall 2011 semester. By comparison, 978 of 14,366 students (7%) in the RI’s general student population violated at least one student code of conduct policy in the 2010–11 academic year. These findings contributed to the researcher’s understanding of the experience of PFC students at the RI.

The average cumulative GPA of the 34 PFC students who enrolled was 1.94, compared to the RI’s general student population’s average cumulative GPA of 2.9. Only nine of the 34 PFC students had GPAs greater than the institutional average of 2.9. Seventeen of the PFC students were enrolled for one quarter before either withdrawing mid-term or not returning to the RI while another seventeen were continuously enrolled. This information indicated that below-average academic performance is a typical experience of PFC students at the RI.

**REJECTED APPLICANT DATA**

Seven applicants were not recommended for admission to the RI. Of those, two applicants were not recommended because of their criminal histories: One had five theft-, robbery-, and forgery-related convictions over a five-year period, and the other had a drug trafficking conviction within two months of filing the application.

Five other applicants were not recommended for admission at the RI but not because of their criminal histories. One applicant withdrew her application because she refused to participate in the special admissions process. She submitted two different written statements in which she expressed strong feelings of stigmatization and marginalization caused by the administrators who required her to disclose details about her conviction in writing despite her recent success as a student at a nearby community college. Notes in her file made it clear that she withdrew so as not to have to disclose the details of her theft and aggravated assault convictions from 1999—more than ten years prior to her application date (Custer 2013).

Three other applicants began the admissions process but did not complete it. One of these applicants was not recommended for admission because she did not submit the required written statement. The review committee determined that it needed mental health treatment records before making decisions regarding the other two applicants. The additional documents were never submitted, with the result that the students ultimately were not recommended. Finally, there was no data on one applicant’s admissions decision, but it is known that he was not admitted. These stories contributed to the researcher’s understanding of applicants’ experiences and of the actual outcomes of the process.

**RESULTS OF DOCUMENT ANALYSIS**

After evaluating the factual information and the attitudes that were expressed in the available written statements (n=53), the researcher concluded that the applicants had varied experiences regarding the disclosure of their felony

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**Table 2. Admissions Decisions and Grade Point Averages of PFC students**

<table>
<thead>
<tr>
<th>Admissions Decisions (n=54)</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admit, no housing</td>
<td>38</td>
<td>70.4</td>
</tr>
<tr>
<td>Admit, no restrictions</td>
<td>5</td>
<td>9.3</td>
</tr>
<tr>
<td>Admit, special restrictions</td>
<td>4</td>
<td>7.4</td>
</tr>
<tr>
<td>No admit, significant criminal history</td>
<td>2</td>
<td>3.7</td>
</tr>
<tr>
<td>No admit, incomplete application</td>
<td>3</td>
<td>5.6</td>
</tr>
<tr>
<td>No admit, withdrew application</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>No data</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>GPA of Enrolled PFC (n=34)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>7</td>
<td>20.6</td>
</tr>
<tr>
<td>0.01-1.99</td>
<td>4</td>
<td>11.8</td>
</tr>
<tr>
<td>2.0-2.99</td>
<td>11</td>
<td>32.4</td>
</tr>
<tr>
<td>3.0-3.99</td>
<td>7</td>
<td>20.6</td>
</tr>
<tr>
<td>4.0</td>
<td>2</td>
<td>5.9</td>
</tr>
<tr>
<td>No GPA Earned</td>
<td>3</td>
<td>8.8</td>
</tr>
</tbody>
</table>
Most notably, 36 applicants expressed a dire need for higher education as a means to a better life, to provide for themselves and their family, and to become a more productive member of society. Twenty applicants expressed gratitude and even pleaded for the RI to consider granting them admission. Nineteen also provided details of personal attributes and characteristics to persuade reviewers of their merits.

Some applicants expressed generally negative attitudes about their felony convictions and/or about the special admissions process. Ten applicants expressed fear, anger, or a sense of being discriminated against in recognizing that they could be denied admission. Nine emphasized the amount of time that had passed since their convictions. Seven applicants stated that the admissions process and/or other situations frequently reminded them of their convictions and of their many lost opportunities. Finally, six applicants made statements relating to their paid debt to society, their already- or soon-to-be-expunged or sealed records, and their lowered self-esteem and embarrassment as a result of their convictions. The information and attitudes conveyed through the applicants’ written statements are sufficient to capture their experience of this process.

**LIMITATIONS**

This study is limited in that the researcher did not interact with the participants. Interviews or focus groups with applicants with felony convictions who went through the special admissions process would be valuable to learn more about their experiences of the process.
Although the sample for the study was the entire population of applicants with prior felony convictions for the given time period, the population size was not sufficient to make generalizable statements about all prospective college students with felony convictions. Future studies with larger sample sizes from additional IHEs are needed to make generalizable conclusions. Institutions that implement special admissions policies should perform systematic assessment to learn the outcomes of the process both as they relate to the applicants and to the campus community.

Because the RI initiated its special admissions process in fall 2009, the researcher could only review each student’s academic and discipline history for a period ranging from one quarter to two years. It would be preferable to evaluate each accepted PFC student’s academic and discipline history from the time of enrollment to the time of graduation or disenrollment.

**DISCUSSION AND CONCLUSIONS**

The researcher’s findings call into question the function of policies at the RI that screen admissions applicants based on their prior criminal history. Data reveal that admitted PFC students had not violated any student policy since their enrollment. There are at least two plausible explanations for this finding; both have policy implications and should be investigated through further research. First, felony conviction history is not necessarily an indicator of future risk to a college campus; the policy implication is that the review of criminal history does not serve a practical purpose. Second, the special review process may successfully screen the dangerous from the non-dangerous applicants, suggesting that the policy does serve a practical purpose.

Some applicants’ statements make it clear that the special admissions process itself is distressing in that it causes feelings of stigmatization, marginalization, and even discrimination. In a few cases, the process deters applicants from completing their applications and thereby prevents them from enrolling. Thus, the process is harmful to some applicants. The researcher wonders how many individuals with prior felony convictions do not apply to the RI at all because they know that a review of their criminal history will ensue.

The RI’s policy ensures that information obtained through the admissions process about applicants’ prior felony convictions is not made available to anyone outside of the admissions process. The information is not used systematically to connect at-risk students to special support services, although this is done on a case-by-case basis. Administrators do notify housing officials when applicants are admitted without eligibility for housing. However, housing officials also require self-disclosure of criminal history on housing applications, and housing officials make their own decisions as to eligibility. The researcher wonders if this practice is both procedurally inefficient and stigmatizing to the applicant.

**RECOMMENDATIONS**

The researcher did not collect data sufficient to answer the question of the overall value of these policies at the RI. While there is no legal duty to screen applicants on the basis of their criminal history (Eiseman v. State of New York 1987) and while the process may be inherently discriminatory (see Table 1, on page 32), more data must be collected to determine whether the policy makes the RI any safer. Data collected for the study clearly indicate that the process could be improved so as to both reduce harm and provide more support to the applicants.

The researcher found that 20 of 54 applicants (37%) had convictions from between 1984 and 2004; all of these were recommended for admission. The only applicants who were not recommended for admission due to their criminal histories (n=2) had convictions within five years of their application date. Therefore, the researcher supports the recommendation of Weissman et al. (2010) that campus administrators should not be concerned about the prior criminal behavior of applicants who were convicted more than five years previously. The RI should narrow the scope of the criminal history review to applicants with convictions only within the past five years; this could prevent the subjection of many applicants to the invasive and time-consuming screening process that is shown to cause feelings of stigmatization and marginalization. This recommendation is in accordance with ample research that indicates that the probability that an individual with a prior felony conviction will recidivate decreases over time (Blumstein and Nakamura 2009). Thus, a conviction with no subsequent offenses loses its relevance over time as a risk factor for employers and others (such as IHEs) that collect and use criminal history information (Blumstein and Nakamura 2009). Questions on admissions application forms should be amended to reflect this narrowed scope.
SUMMARY

Few studies address issues related to students with felony convictions or special admissions policies for such students in higher education. The results of the current mixed-method study reveal that special admissions policies distress and deter some applicants. The study also reveals that admitted students with prior felony convictions had no subsequent policy violations at the RI but did have high drop-out rates and below average grades. The study does not generate conclusive evidence as to whether special admissions processes improve campus safety, but it does generate evidence that should prompt reconsideration of current practices. In order to prevent the marginalization and stigmatization of ex-offenders in higher education, more studies should be conducted before IHE implement special admissions policies for applicants with prior felony convictions.

REFERENCES


About the Author

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Colleges and universities have developed strategies to improve completion rates, particularly among adult and online learners. One innovative practice has been to increase the availability of courses, particularly in high demand subjects. This article describes the University System of Georgia's first-year successes and challenges implementing a multi-institution registration system to expand course availability in online collaborative programs.
An innovative new idea very often succeeds not because it is noble but because it can serve a useful purpose both for the larger system as well as for its proponents. —Anonymous

INTRODUCTION

Adult learners represent one of the largest groups to further the goals of college completion. Enrollment increases by individuals over the age of 25 are expected to exceed those of younger students through 2016 (Cordes 2009). Many adult students already will have earned some college credit, making them prime targets for completion efforts. Still, the United States lags behind other developed countries in the number of adult learners who complete college: The percentage of young adults in the United States between the ages of 25 and 34 years who complete college is 37, compared with 52.8 percent in Korea, Japan, and Canada (CAEL 2008).

Barriers to college completion are well-documented in the literature (Gray 2004; Miller 2007; Smith, Edminster and Sullivan 2001; Tinto 1975). Barriers include onerous remedial education courses, inadequate student advisement, and lack of pre-college preparation. Studies of distance education course attrition indicate that students who drop or fail a course are more likely to believe that distance education courses are easier than traditional classroom courses (Nash 2005). Studies that examine college retention among African American adult populations identify social and cultural factors that contribute to attrition, including negative faculty attitudes, lack of minority faculty and staff members, and lack of sociocultural support (Johnson-Bailey 2001; Rosser-Mims, Palmer and Harroff 2011). But an emerging body of evidence suggests that course availability also may play a role in thwarting college completion, particularly by nontraditional students (Martin and Meyer 2010). A recent study by the Pearson Foundation indicates that nearly four in 10 students (37%) are unable to enroll in a class because it is full (n.a. 2011). Increasing student enrollments coupled with reductions in numbers of faculty numbers may tax the capacity of institutions to offer sufficient numbers of course sections to enable students to complete their degrees in a timely manner.

In response to increased demand for course seats, higher education institutions are pursuing innovative solutions that include rethinking traditional registration practices and procedures. Strategies include packaging schedules to reserve course seats, working with academic departments and leaders to forecast high-demand courses and plan accordingly, and better aligning course offerings—particularly for summer terms—with the needs and interests of students (von Munkwitz-Smith 2007). While these efforts hold great promise for alleviating the paucity of seats in high-demand courses, technology also can play a major role in facilitating greater course seat availability, particularly at institutions offering online programs as part of an effort to better serve adult and military students. This article describes the University System of Georgia’s (USG’s) first-year successes and challenges related to implementation of a multi-institution registration system to facilitate the sharing of seats in online collaborative courses. The study sought to answer the following questions:

- To what extent does INGRESS enable the sharing of course seats across multiple institutions participating in USG online collaboratives?
- What are the perceptions of registration staff in terms of administrative workload and task complexity associated with INGRESS?
- What lessons from initial implementation of INGRESS have been learned that can inform future action?
METHODOLOGY
Data were derived from a survey of INGRESS campus administrators, support requests logged in the ITS case management system, and program tracking information. Job titles for INGRESS campus administrators vary across institutions, so it was necessary to identify a sample of administrators to complete the online survey. The sample selection criteria were campus administrators who performed the following duties: (1) configure INGRESS-generated course sections in Banner; (2) run the various Banner Georgia modifications for INGRESS; (3) act on INGRESS-generated e-mail notifications; and (4) serve as the primary INGRESS campus administrator for the institution. A total of nineteen INGRESS campus administrators met the selection criteria. The survey was open for a two-week period and generated a 100 percent response rate. Data were triangulated and analyzed for themes and patterns (Charmaz 2006).

ADULT LEARNERS AND ONLINE EDUCATION
Students ages 25 years and older represent one of the fastest-growing segments of America's higher education. On average, 38 percent of all students (undergraduate and graduate) enrolled in a fall term are adult learners (NSCRC 2012). Younger adult learners typically are enrolled full time, but as they age, they are more likely to enroll part time as they juggle the competing demands of work, family, and school. According to the Council on Adult and Experiential Learning (2008), in 35 states, more than 60 percent of the population between the ages of 25 and 64 years does not have an associate's or higher degree. The largest population of non-degree adult learners is in the south.

Online education is attractive to adult learners. Between 2003 and 2011, enrollments in online education offerings grew substantially faster than overall higher education enrollments. In fall 2010, more than 6.1 million students were enrolled in at least one online course, an increase of 560,000 students from fall 2009 (Allen and Seaman 2012). The expansion of online education can be attributed in part to the increasing enrollments of adult learners. In addition, an increasing number of institutions offer fully online degree programs in fields such as criminal justice, business administration, education, and information technology (Instructional Technology Council 2012). And while the rate of online learning has begun to plateau in recent years, online education remains popular among adult learners—particularly service members and their families. For-profit online higher education providers have been particularly aggressive in marketing to military students. Peters (2011) writes that in the past decade, the percentage of active-duty service members enrolled in an online course increased from fifteen to 60. Public colleges and universities also are becoming more proactive in reaching out to military students in response both to the need to improve services to adult learners and the political advantages of meeting the needs of service members. Higher education institutions that historically have viewed alternative credit systems with some skepticism are becoming more accepting of programs such as Prior Learning Assessment (PLA). For adult and military students, these alternative credit mechanisms can shorten the time to degree and thus may improve completion (CAEL 2010).

Perhaps the most challenging aspect of expanding an institution's participation in online education is maintaining its ability to deliver services to students in ways that parallel the convenience and flexibility of online instruction. State budget cuts have limited the ability of campuses to keep pace with the demand for more convenient and flexible student services (Instructional Technology Council 2012). Institutions that offer online education need to make their services—including admissions, registration, fee payment, textbooks and other course materials, technical support, and advising—available 24 x 7. Adult students may find it difficult to take time away from work to travel to campus to complete such activities; active-duty military personnel deployed half-way around the world cannot possibly visit campus to transact business. Services for adult students have been characterized as "high-tech" and "high-touch," recognizing the importance of good customer service within a technologically advanced environment. Streamlining business processes to deliver high-quality and convenient services for all students—particularly adult learners—is a critical component of college completion plans.

ONLINE COLLABORATIVES IN THE UNIVERSITY SYSTEM OF GEORGIA
The University System of Georgia (USG) comprises 31 public institutions including research, regional, and state universities as well as two-year colleges. The system is gov-
erned by a Board of Regents which appoints a chancellor as the chief executive officer. The University System enrolled approximately 318,027 students in fall 2011 and employed 43,111 faculty and staff. Thirty of the 31 institutions use Ellucian’s Banner as the Student Information System and Desire2Learn is the common Learning Management System (LMS) platform. However, each Banner installation is customized for the particular institution where it is utilized.

USG institutions are encouraged to collaborate in offering online programs as a means to reduce duplication and improve efficiencies. Each online collaborative is responsible for curriculum development and the development of policies and procedures governing the operations of the collaborative. The collaborative governance body determines a common tuition rate, tuition-sharing agreements, course participation requirements, and teaching schedules. Most of the existing collaboratives comprise graduate online programs, but a new emphasis on undergraduate collaborative programs has emerged to address the needs of adult and military personnel.

The online collaboratives operate according to various course delivery models. In the centralized model, only one institution in the collaborative offers all online courses in the curriculum. In the decentralized model, different institutions in the collaborative offer specific courses according to the expertise of their faculty members. The third model is best described as a hybrid: A centralized administrative structure provides student services, but courses are offered by different colleges and universities within the collaborative. A common feature of all online collaboratives using INGRESS is that rather than going through the usual transient admissions process, students use Banner to register, pay, and access final grades for courses at the home institution—including those courses taught by other USG schools.

The goals of INGRESS are to increase seat availability and to improve services for online students.
OVERVIEW OF INTRA-GEORGIA REGISTRATION SHARING SYSTEM (INGRESS)

To facilitate the sharing of course seats within online collaboratives, USG Information Technology Services (ITS) developed the Intra-Georgia Registration System (INGRESS) in partnership with the Digital Innovation Group.* INGRESS provides the following core functions: (1) dynamically balances the available seats in shared course sections across multiple institutions; (2) creates a single roster that lists all students enrolled in a shared course section; (3) creates data to enroll students from multiple home institutions into a single online course section in the Learning Management System for instruction; (4) and securely collects and distributes attendance verification, mid-term, and final grade data to students’ home institution Banner system. With the use of INGRESS, institutions are able to expand the number of course seats to students through collaborations.

INGRESS is integrated with USG’s Desire2Learn collaborative Learning Management System and Ellucian’s Banner student information system. The collaborative LMS is the site of instructional activities for online collaborative courses. Figure 1 is a simplified illustration of how enrollments from different institutions are aggregated by INGRESS into a single online course section for instructional delivery on the collaborative LMS.

A sample course, EDAT 7100, section Y01, is shown for demonstration purposes (see Figure 1). Enrollments from multiple Banner systems are connected to INGRESS. (For the sake of simplicity, only a single Banner environment is shown.) Registrar’s office staff affiliated with the institution that teaches the online collaborative course section assign a code in Banner indicating that the section is a “sending” section. The institution that designates a “sending” section “owns” the faculty who teach the course and also is responsible for assigning the maximum number of course seats. Receiving institutions register students for a course section but do not “own” the faculty member who teaches the course. There can be only one “sending” institution but multiple “receiving” institutions for a shared course section. In the following illustration, there is one sending institution (A) and two receiving institutions (B and C) for EDAT 7100 Y01. A total of seven seats are available in this course section, with two students enrolled at institution A (the sending institution), two students at receiving institution B, and three students at institution C.

The consolidated course roster for EDAT 7100 Y01 is within the INGRESS application that lists all seven students enrolled in the section as well as the assigned instructor. A data file containing course and enrollment data is loaded
into the collaborative LMS, where all seven students from institutions A, B, and C come together in the online EDAT 7100 Y01 course section with the instructor from institution A.

ENVIRONMENT DATA FLOW

Data for INGRESS-processed courses are transferred among three distinct technical environments using a combination of automated and manual processes. Many of these integration processes are actually Georgia modifications for Banner developed by ITS. Figure 2 illustrates the general data flow for enrollment and course information.

Shared course sections are configured in Banner using common course subject and section codes so the INGRESS application can match course sections from disparate institutions. Online collaborative course sections targeted for INGRESS processing are assigned a special code that flags these sections in Banner. To transfer the course section data from Banner to INGRESS, each registrar’s office must run a Banner integration process developed by ITS to transfer a limited amount of data (i.e., subject code, section code, title, part of term, teaching faculty name, sending or receiving institution) from the institution’s Banner system to the INGRESS environment for processing. Once the single course section is created in the INGRESS database, INGRESS apportions the number of seats according to a formula that considers both the number of schools sharing the course and the maximum number of seats assigned by the sending institution. For each institution sharing an online course section, INGRESS sets the initial number of seats directly in Banner.

As students register, drop, add, or withdraw at their home institutions, enrollment data are stored in baseline Banner. The registrar’s office executes a Banner integration process developed by ITS to transfer the enrollment data to the institution’s Banner intermediate table. Based on a timed schedule (currently set at every 10 minutes), an INGRESS process automatically extracts enrollment data from each institution’s intermediate table and transfers them to the INGRESS mimic tables. INGRESS recalculates the number of available seats and updates the seat count directly in Banner. A process is run to transfer the enrollment data (including each student’s name, course section, and log-in credentials) packaged in an XML file for importation into the collaborative LMS database. The course instructor enters attendance verification, mid-term, and final grade data using a special Web form accessible from the faculty online course listing page in the collaborative LMS. (Attendance is reported as “A” for absent or “P” for present.) Once attendance verification and grade data have been submitted to INGRESS, a process runs au-
Automatically to transfer data to each student’s home institution Banner intermediate table. Currently, this process executes twice per day. A Banner modification created by ITS is used by the registrar’s office at each student’s home institution to import the attendance verification and grade data from the intermediate table into baseline Banner.

**SEAT BALANCER FUNCTION**

The so-called “seat balancer” is the most vital function of the INGRESS application. As students register for shared online course sections and as enrollment data are transferred to INGRESS for processing, the seat balancer dynamically recalculates the number of available seats for the course sections and re-allocations them to the participating institutions according to a re-defined formula. The process of calculating, re-allocating, and updating in Banner the available seats for each institution continues throughout the registration period. The seat balancer can be set to run at various polling intervals (e.g., 3, 5, or 10 minutes) depending on overall system performance. It takes approximately two–three minutes from the point at which data are extracted from the campus intermediate tables until seats are updated in Banner. During this period, the number of available seats is returned to “zero” in the institution’s Banner system to prevent further Web registrations from occurring during the calculation process.

**FINDINGS**

The number of shared course sections increased 52 percent between spring 2011 and fall 2012. The largest increase in shared course sections occurred within the online general education collaborative courses (eCore) using INGRESS. As of summer 2012, a total of fifteen colleges and universities within USG were using INGRESS to share course seats; this figure represents approximately one-half of all USG institutions. Despite the overall increase in the number USG institutions using INGRESS, the demand for INGRESS has far exceeded the capacity of ITS resources to accommodate additional requests by institutions to deploy INGRESS. (See Table 1, for a term-to-term comparison of the change in course enrollments, shared course sections, and institutions using INGRESS from spring 2011 to fall 2012.)

Although the undergraduate collaboratives represent a smaller percentage of all USG online collaboratives, a larger proportion of undergraduate course seats are shared. (See Table 2, on page 45, for a listing of the titles of the USG graduate and undergraduate online collaboratives that used INGRESS to process shared course sections as of fall 2012.)

**REGISTRATION STAFF WORK IMPACT**

Figure 3 illustrates the impact of INGRESS support on campus registration staff workload. Although the actual time requirement may vary depending on the phase of the registration cycle, the majority of respondents (68%) reported spending less than 10 percent of their work week on INGRESS-related tasks.

**TECHNICAL BARRIERS**

Campuses submitted a total of 168 support requests for INGRESS-related issues during registration cycles in spring

### Table 1.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Spring 2011</th>
<th>Spring 2012</th>
<th>Percent Change</th>
<th>Summer 2011</th>
<th>Summer 2012</th>
<th>Percent Change</th>
<th>Fall 2011</th>
<th>Fall 2012</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Enrollments</td>
<td>4,326</td>
<td>4,892</td>
<td>13</td>
<td>3,737</td>
<td>3,640</td>
<td>-3</td>
<td>4,509</td>
<td>6,458</td>
<td>54</td>
</tr>
<tr>
<td>Shared Sections</td>
<td>194</td>
<td>260</td>
<td>66</td>
<td>170</td>
<td>184</td>
<td>8</td>
<td>249</td>
<td>294</td>
<td>45</td>
</tr>
<tr>
<td>Institutions</td>
<td>8</td>
<td>15</td>
<td>7</td>
<td>11</td>
<td>15</td>
<td>4</td>
<td>15</td>
<td>15</td>
<td>0</td>
</tr>
</tbody>
</table>

1 INGRESS first was implemented for the spring 2011 registration cycle.
2011 through summer 2012. Forty percent of all support issues were the result of technical problems associated with the INGRESS application. Because the current design of INGRESS requires data to be extracted from all 15 institutions in the INGRESS network before the seat balancer calculations can be completed, excessive delays in data transfers at one institution will prolong the updating of available seats in Banner for all institutions. Campus registration staff indicated that issues related to the timing of data extractions were problematic, particularly during heavy registration periods. One staff member reported:

The only real issue lies with performance. It takes far too long for the [seat] balancer to run. When the load balancer is running, it resets all seats to zero while it recalculates the number of seats. It takes far, far too long to set the seats back to a non-zero value. During this time, students cannot register. This is particularly bad during the time when INGRESS is first started for the term or during peak registration periods.

COMMUNICATING ACROSS ORGANIZATIONAL BOUNDARIES

The sending/receiving concept that characterizes INGRESS requires communications on a number of different levels. Twenty-seven percent of support issues (46 in number) were caused by the lack of communication between various departments on campus or the lack of coordination among collaborative partners on different campuses. The installation of new software applications or processes running concurrently against the campus Banner database may adversely affect the rate of data exchange between INGRESS and an institution’s Banner system. For that reason, IT operational departments should communicate with registration staff to assess the potential impact of any new applications, patches, and/or upgrades on INGRESS functionalities before such actions are taken. Registrar’s office staff must work collaboratively with the registration staff at other institutions that share course seats to coordinate the cancelling of course sections and/or the opening of new sections. When an institution will install a Georgia modification for INGRESS cannot be decided in isolation. Campuses should coordinate this action such that it does not adversely affect faculty teaching INGRESS-processed courses. Collaborative LMS administrators must work with their registration staff counterparts to determine

<table>
<thead>
<tr>
<th>Table 2. USG Online Collaboratives Sharing Course Seats</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Undergraduate</strong></td>
</tr>
<tr>
<td>Electronic Core Curriculum (eCore)</td>
</tr>
<tr>
<td>B.S. Organizational Leadership</td>
</tr>
<tr>
<td>Prior Learning Assessment</td>
</tr>
<tr>
<td>B.S. Information Technology (WebBSIT)</td>
</tr>
<tr>
<td>B.S. Criminal Justice</td>
</tr>
<tr>
<td><strong>Graduate</strong></td>
</tr>
<tr>
<td>Nursing</td>
</tr>
<tr>
<td>Educational Research</td>
</tr>
<tr>
<td>Secondary Math and Science</td>
</tr>
<tr>
<td>Reading, Language &amp; Literacy (MAT)</td>
</tr>
<tr>
<td>Reading, Language &amp; Literacy (MED)</td>
</tr>
<tr>
<td>Instructional Technology</td>
</tr>
<tr>
<td>Middle Grades Math and Science</td>
</tr>
<tr>
<td>Special Education-General Curriculum</td>
</tr>
<tr>
<td>Special Education-Adapted Curriculum</td>
</tr>
<tr>
<td>Curriculum &amp; Instruction-Exemplary Teaching</td>
</tr>
<tr>
<td>Online Teaching Certificate</td>
</tr>
<tr>
<td>ESOL Endorsement</td>
</tr>
<tr>
<td>Instructional Technology-Library Media Certificate</td>
</tr>
<tr>
<td>Gifted Endorsement</td>
</tr>
<tr>
<td>Online Teaching Endorsement</td>
</tr>
</tbody>
</table>

![FIGURE 3. Weekly INGRESS Impact on Registration Staff Workload](chart.png)
The root cause of eighteen percent of all support issues (30 in number) could be traced to the lack of understanding of INGRESS operations, including data transfer schedules and course-section configuration in Banner. (Table 3 categorizes the root cause of support requests submitted from spring 2011 through summer 2012.)

### Table 3.
**Root Cause Analysis of INGRESS Support Requests**

<table>
<thead>
<tr>
<th>Term</th>
<th>Technical</th>
<th>Communications</th>
<th>Training</th>
<th>Other</th>
<th>Total Requests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring 2011</td>
<td>30</td>
<td>25</td>
<td>7</td>
<td>1</td>
<td>63</td>
</tr>
<tr>
<td>Summer 2011</td>
<td>15</td>
<td>10</td>
<td>7</td>
<td>5</td>
<td>37</td>
</tr>
<tr>
<td>Fall 2011</td>
<td>5</td>
<td>8</td>
<td>6</td>
<td>7</td>
<td>26</td>
</tr>
<tr>
<td>Spring 2012</td>
<td>12</td>
<td>2</td>
<td>5</td>
<td>8</td>
<td>27</td>
</tr>
<tr>
<td>Summer 2012</td>
<td>6</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>68</strong></td>
<td><strong>46</strong></td>
<td><strong>30</strong></td>
<td><strong>24</strong></td>
<td><strong>168</strong></td>
</tr>
</tbody>
</table>

when enrollment data have been processed from Banner to INGRESS so they can troubleshoot student and faculty log-in issues for the LMS.

The root cause of eighteen percent of all support issues (30 in number) could be traced to the lack of understanding of INGRESS operations, including data transfer schedules and course-section configuration in Banner. (Table 3 categorizes the root cause of support requests submitted from spring 2011 through summer 2012.)

### PROTECTING STUDENT PRIVACY

Registrar’s office staff affiliated with the sending institution for a shared course section have access to a consolidated course roster within the INGRESS user interface that lists information for all students enrolled in the course (similar to what one might see if the students were enrolled as transients). However, staff affiliated with the receiving institution are restricted to accessing the un-consolidated roster. The un-consolidated course roster includes the same information as the consolidated roster but only for students who are enrolled at the receiving school. These different versions of course rosters were designed to comply with student privacy regulations as defined by the Family Educational Rights and Privacy Act (FERPA).

The restrictions on access to the INGRESS consolidated course roster have presented an interesting legal challenge for certain online collaborative programs using USG staff as third-party service providers. Student success staff serve in a contracted administrative role authorized by the governance body of the online collaborative. Their goal is to monitor student enrollments across all institutions enrolling students in a shared course and to implement strategies that improve student retention and completion. The consolidated course roster is viewed as an important tool in the monitoring efforts. However, student success staff may not be affiliated with either the sending or the receiving institution. Rather, they may be employed by a third USG institution functioning as a service provider.

### DISCUSSION

INGRESS was designed to facilitate the sharing of course seats among multiple institutions offering online collaborative programs and courses. Course-sharing strategies may positively affect student success efforts by expanding opportunities for students to enroll in high-demand courses and complete their programs of study on time. Indeed, Smith (2012) argues that technology solutions like INGRESS can be instrumental for “increasing access, retention, and completion in U.S. higher education.” During the first year of INGRESS implementation, the number of course sections shared among multiple institutions has increased each term, thereby providing greater opportunities for students to progress toward degree completion. Moreover, the impact of INGRESS support on registration staff workload has been relatively minor.

Despite the apparent initial successes of INGRESS, more work is needed to improve specific functionalities and features, e.g., the seat balancer and other INGRESS tools that are available to campus administrators. The INGRESS product roadmap includes a series of technical enhancements—including redesign of the data extraction process—to improve various functions. In addition, Information Technology Services has plans to create modularized online training courses to improve the skills and
knowledge of campus staff as they relate to INGRESS operations. A “Community of Practice” site has been created in Sharepoint to strengthen communications and outreach.

Successful implementation of INGRESS requires a re-definition of organizational culture, business processes, and policies. As a registration tool, INGRESS should be viewed as an extension of the institution’s Student Information System and integrated within existing ERP support structures. Cramer (2006) posits that implementing a new student information system challenges “individuals on campus [to] rethink what they do and the extent to which their actions impact other campus units... It requires people with very different values to collaborate.” Indeed, USG’s experience with INGRESS substantiates the notion that the sharing of seats across multiple institutions is a virtuous goal to improve completion—one that is predicated on transcending work silos and developing new business processes. Perhaps one of the most important lessons that has emerged is the critical nature of cross-boundary communications. As the number of online collaborative programs continues to increase, it will become imperative for USG to seek solutions that safeguard the privacy of student information while acknowledging new ways in which colleges and universities are engaged in partnerships to promote student retention in online courses.

INGRESS AND COLLEGE COMPLETION: POSSIBLE RESEARCH

Although more work is needed to improve and refine the functions of INGRESS, the University System of Georgia has demonstrated that innovative technological solutions such as INGRESS can be a resource for addressing the challenges to college completion—particularly for adult learners. As part of a longitudinal study, USG institutions utilizing INGRESS could compare the time-to-completion rates of students assigned to two experimental groups: those enrolled in INGRESS-processed courses and those enrolled in courses that do not utilize INGRESS. The analysis would seek to determine whether there is a statistically significant difference between the two student groups’ completion rates. Courses selected for the study would be those in which enrollment was restricted to degree majors (thereby suggesting the importance of course seat demand, time, and sequence). The hypothesis of such an analysis could be that completion rates are higher for INGRESS-processed courses than for non-INGRESS course enrollments. Caution must be exercised in making generalizations about the impact of INGRESS (certainly, other factors promote completion), but the study would promote insight into the relationship between course availability and time to completion. As higher education institutions seek new ways to serve adult and military students, tools such as INGRESS may provide answers.

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About the Author

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The last decade and a half have witnessed a dramatic increase in advanced technologies for enrollment services. The increase is evident in the presence of numerous vendors in the exhibit halls at professional conferences attended by campus technology experts and higher education administrators. One technology that emerged in the 1990s was the degree audit reporting systems (DARS). DARS identifies the completion status of degree requirements for individual students—that is, it determines which degree requirements are satisfied as students complete their college courses. Academic advisors and students utilize DARS primarily as an electronic advisement tool. Campuses use DARS to determine enrollment demands. Enrollment managers at the various California State University system campuses are among those who have begun to use DARS to identify students who meet certain criteria for priority registration. (For example, undergraduates within one term of graduating will be assigned the earliest registration times.) There is no doubt that, if fully implemented, DARS can be utilized to meet other enrollment management needs.

Although DARS has been in existence for approximately two decades, many universities have not been so quick to implement it. Even when it has been implemented, some campuses appear to have had some angst about utilizing it as an advisement tool. This sentiment is more prevalent on campuses that enroll large populations of transfer students. Advisors and students alike are uneasy about the system’s ability to apply transfer courses to the ‘native’ curriculum. Identifying which requirements transfer courses satisfy is a complex endeavor; thus, these end-users’ skepticism seems justified. DARS administrators must clarify this process for the academic advisement community on campus if they are to eliminate or combat misconceptions about transfer coursework.

Unlike newer technologies for customer relationship management, online catalogs, and data capture, DARS implementations require an enormous amount of human and financial resources. My own experience of two DARS implementations suggests that the effective use of human resources is most critical to such projects’ success. Despite significant budgetary support, DARS projects are susceptible to failure if the personnel charged with incorporating it into academic advisement processes neglect to involve key stakeholders from the outset. That said, campus administrators involved in DARS projects must pay close attention to how much of the “human” element is incorporated in the project plan.

No matter the scope or ultimate purpose, any DARS implementation requires the completion of specific tasks...
which, depending on the size of the institution, may involve several phases. Each of these tasks and phases is equal in importance to the others. The success of any DARS project depends on how thoroughly each task is accomplished and how the phases are scheduled and implemented. Following are some of the major tasks involved in developing DARS technology on campus. (Note that these steps are iterative and may be completed in a different sequence from what is presented.)

- Review the structure of the academic programs.
  - Identify universal requirements. Such requirements apply to all students from the same population. Develop a strategy for presenting universal requirements in report form. Will the requirements be presented before the major-specific requirements, or will they follow them? Be aware of any exceptions so they can be factored into the coding scheme for the degree requirements.
  - Compare degree requirements. Do certain populations share a “core” set of requirements? Identify distinct features or requirements of specific majors or areas of emphasis. Strategize how reports can be structured so that common elements are presented in the same way and so that differences are labeled in accordance with academic departments’ terminology (e.g., tracks, emphasis, concentrations, etc.).
  - Know the basis for change in curricula. Most universities implement curricular changes on an annual basis. Develop a long-term plan for capturing these changes. It is always preferable to simplify the steps necessary for maintaining the system.

- Decide on the scope of initial implementation.
  - Know the size of the student population of each of the programs of study. Base the scope of the implementation on the size of the population, and be sure to also identify other factors—such as politics or staffing issues—that might enhance or compromise the success of the project.
  - Determine which programs will be included in the initial implementation. Make these decisions in consultation with key stakeholders, such as college deans and academic advisors. If the campus prefers a soft roll-out, it may be wise to start with the program that enrolls the smallest population of students. Soft roll-outs allow for modifications to be made before larger groups are affected.

- Meet with department administrators and other targeted users.
  - Be informed about nuances in academic advising. Handouts or brochures about academic programs do not always contain detailed information that students need to complete their graduation requirements efficiently. Often, such details are mentioned only in person, during meetings with advisors. For example, advisors may tell students “to take this course before that one.” As long as such details do not contradict official degree requirements (as printed in the university catalog), brief statements can be incorporated into the degree audit reports to alert students of certain procedures they must follow. DARS implementation teams typically do not become aware of such “advising tips” unless they engage in in-depth conversations with department heads or advisors about how advisement in their areas is conducted.
  - Commit to sample testing. The primary cause of failure in any technology-based project is the lack of thorough testing. Although the involvement of department heads in testing does not guarantee a smooth implementation, their lack of involvement is certain to result in challenges in the project’s later stages. Testing not only permits troubleshooting before the “go live” date, but it also allows academic departments to become familiar with the reports, thus preparing them to field student questions.

- Encode the curriculum requirements.
  - Develop a logical coding method. First and foremost, decide whether the codes to be used to identify distinct sets of requirements will be alphabetic, numeric, or alpha-numeric. Once that decision has been made, adhere to it. Parsimony in the number and variety of codes used proves wise in the long run. Documenting the coding schemes used to capture the degree requirements from the outset of the project will benefit everyone who is involved in maintaining and enhancing the system.
Code the requirements. It is to be expected that staff members charged with this task will begin with basic coding strategies and then will use more sophisticated ones as they become familiar with the process. Should the need to change the original coding scheme arise, document why, how, and when the changes were made.

Incorporate ‘advising tips.’ Degree audit reports that include a human touch—for example, encouraging comments—have a greater impact on students than those that merely list degree requirements. Add statements to the report that “speak” to students: Perhaps “You have completed the International Marketing Emphasis!” could be programmed to appear on the report when the requirements for this area have been met.

Plan for exceptions. Not all students take the identical set of required courses. Some may ask to substitute courses. Determine how the report will incorporate exceptions. More important, assess any impact DARS technology may have on existing policies. If campus policy allows for it, create a request form to standardize requests for and granting and recording of exceptions.

Build an infrastructure for the DARS project.

Build a website. Tell the project’s story. Post a sample report online, and develop a document that describes how to interpret the report. Indicate which majors will be the first to have a degree audit report and which will follow (and when). Explain how the report can be used to enhance academic advisement. Provide contact information. In short, publish information about DARS online as part of an intentional effort to help the campus engage in this new technology.

Develop several online resources. Nothing is more frustrating and discouraging when using a new system than not knowing how to inform its creators that something is wrong. As is true of any new technology, errors in the product—here, the degree audit report—will become apparent during the initial stages of implementation. Administrators and academics understand that such glitches are inevitable; in most cases, they are willing to contribute to the efforts required to correct them. Provide an online feedback form at the same time the degree audit reports are made accessible to the campus community. The form will enable the reports’ users to help shape the implementation of this advising tool.

Disseminate information widely—in person.

Attend meetings, conduct workshops, and give presentations. The benefit of meeting advisors in person when launching this advising tool is enormous. Meetings will provide an opportunity to exchange ideas and concerns that may be more difficult to communicate via email or phone. Meetings also allow campus users to put a face (literally, the faces of the DARS implementation team) to the technology. This is critical to building trust in the system.

Inform students about DARS during orientation. Students should be trained to use the system as early in their college career as possible. Tout the benefits of using this technology. More important, encourage students to use DARS as an advising tool when discussing their progress to degree with their advisors. Students can serve as project ambassadors to the advising community. Last, provide students with contact information should they have any questions about their degree audit reports.

Assess the report’s effectiveness.

Identify errors, and correct them immediately. Hardly any new technology is flawless. The manual programming that is key to DARS’ customization makes the technology particularly susceptible to wrong information. Good DARS implementation teams recognize the value of feedback. They also understand that the discovery of incorrect information on degree audit reports does not necessarily reflect negatively on their dedication to the project. What may appear to be an error in fact may be an accurate depiction of a missing transcript or academic petition. As an administrator once said, “We realize the enormity of the project and understand that errors are unavoidable. Just don’t be defensive about it.”

Assess areas of misinterpretation or causes of confusion. Some areas of the degree audit report may be difficult to understand. As in any communication, people occasionally attach different meanings to a word
or phrase. This is equally true of the degree audit report. Identify areas that are prone to misinterpretation or confusion and refine them so they are readily understood by advisors and students alike.

Although this is not a comprehensive list of tasks comprising a DARS project, it demonstrates the importance of building relationships with the users of the technology. Implementation teams that fail to do so compromise the effectiveness of DARS as an advising tool. At most universities, academic advisement is a personal matter; relinquishing this process even in part to an electronic tool requires trust in the technology. Advisors want to feel comfortable with DARS before they rely on it. For this reason, administrators must ensure that DARS project teams make every effort to provide the “human touch” during implementation. Time spent learning the campus advisement culture, identifying sources of apprehension about technology, and building rapport with prospective users will prove to be time well spent.

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In 2010, the University of Tennessee, Knoxville (UT) adopted a new strategic plan focused on becoming a top-25 public research university (see www.utk.edu/volvision-top25/). The plan, called Vol Vision, focuses on five key areas: undergraduate students, graduate students, faculty and staff, research, and infrastructure. This article summarizes a series of efforts that target retention and graduation goals for undergraduate students. When the strategic plan was first discussed, the first-to-second year retention rate at UT was 84 percent (http://oira.utk.edu/factbook/outcome)—well below the goal of 90 percent for full-time first-time freshmen. At 60 percent in 2010, UT’s six-year graduation rate was significantly below the 84 percent average of the top-25 comparison group.

In just two years, UT has already seen progress on these two metrics: Retention rates have increased by one percentage point, and six-year graduation rates have increased by three points (www.utk.edu/volvision-top25/). These successes can be attributed at least in part to a series of action plans that focused on course data analysis, policy changes, enhanced course scheduling tools, and curriculum analysis. Additional changes scheduled for fall 2013 will further support students as they explore options and register for classes in their chosen fields of study.

Even before the Vol Vision plan was finalized, the chancellor charged a task force to develop strategies for enhancing the efficiency and effectiveness of academic policies, procedures, and resource allocation (http://chancellor.utk.edu/newsletter/academic-efficiency-and-effectiveness.php). A key focus was on removing bottlenecks that impeded student progress to timely graduation. Classroom scheduling also was targeted in order to determine the validity of complaints about scheduling procedures; complaints frequently were expressed in the student newspaper (see, for example, http://utdailybeacon.com/opinion/columns/off-the-deep-end/2010/nov/17/ut-creates-unnecessary-classroom-issues/). Following is a brief chronology that outlines actions designed to remove bottlenecks and enable students to persist to graduation.

In fall 2009, the timetable office at the University of Tennessee consisted of two full-time employees in the Office of the University Registrar. The decentralized timetabling system allowed representatives in every department to input their course schedules directly into a legacy student information system (SIS) and also to assign classrooms of certain categories to their sections. The timetable staff members were primarily responsible for ensuring that timetable functions occurred according to the proper timeline and for troubleshooting technical problems. In
addition, the staff monitored the overall integrity of the timetable and attempted to eliminate gross inefficiencies in classroom utilization.

Each semester the same problems recurred: Conflicts arose among departments requesting the same classrooms at the same times, and the timetable office was empowered neither to make determinations of priority nor to require a department to make changes to eliminate the conflict. Courses were held on the opposite side of campus from their home department because classrooms in nearby buildings were already assigned. The large number of courses offered by departments at prime class times often resulted in more courses than classrooms, but even then the timetable office had no authority to compel departments to change the times of their offerings.

These problems needed to be addressed, but gathering data that would clearly communicate the need to those who could empower the timetable staff with decision-making authority proved difficult. Documentation was limited to relaying complaints and requests submitted via phone or email. Examples of such feedback included students who couldn’t register for a class because it was taught at the same time as another required class, new requests for accessible classrooms after the semester had already begun, or faculty members wanting to teach three back-to-back sections in the same classroom. Reports from the legacy SIS were available in paper format only, with no mechanism for filtering or sorting relevant data. UT was using a third-party room-scheduling software (Ad Astra) that had reporting capabilities, but the version was no longer supported by the vendor, rendering the reports unusable. Reports with incomplete (and often suspect) data that were pieced together from separate sources failed to communicate the urgent need to solve the timetable office’s problems.

A breakthrough came in late 2009, when members of the Academic Efficiency and Effectiveness Task Force requested a report on classroom utilization. The task force meetings provided a venue in which scheduling issues could be discussed as they related not only to classroom utilization but also to departmental course offerings and availability. Administrators began to focus on how departments could become more proactive and strategic in their course offerings to improve student success.

At the same time, the university was embarking on several other initiatives that would prove transformational for the timetable office as well as the campus as a whole. In spring 2010, UT began the transition from the legacy student information system to an enterprise resource planning system. Implementation of the Banner Student Information System and the Argos Enterprise Reporting Solution promised improved data integrity and reporting capabilities. An investment in additional resources as part of the top-25 campaign allowed for an upgrade of the Ad Astra room scheduling software as well as the purchase of an additional product (Platinum Analytics, discussed below) designed to analyze course offerings and demand.

Since 2010, course-scheduling guidelines have been implemented that require departments to spread their course offerings throughout the week. Increased reporting capabilities in the new systems provide the timetable office with the data needed to determine compliance with scheduling guidelines. The compliance results, in turn, provide a mechanism for determining priority in situations of classroom conflicts, for identifying departments that need to change the times of their offerings to ensure classroom availability, and, ultimately, for increasing the efficiency of classroom utilization. In addition, course-offering and enrollment data have become integral to the planning and implementation of multiple top-25 initiatives that affect student success.

Beginning in spring 2012, a concerted effort was made to use micro-level data to support macro-level decisions about course offerings for the fall 2012 semester. Registration and timetable information was analyzed in an attempt to understand where course offerings and section capacities were causing problems for students. This analysis supported UT’s creation of a “watch list” of courses that could become bottlenecks in students’ progress toward graduation.

This effort also incorporated data provided by Platinum Analytics that included an historical analysis of fall course offerings. The analysis evaluated fall enrollment information from the previous five years, the most recent fall enrollment information, and current timetable course offerings (i.e., for fall 2012). On this basis, suggestions were made with regard to how many sections of a given course should be added or eliminated.
A corollary top-25 initiative was the creation of a Strategic Instruction Fund (SIF) designed to enable units to fund faculty positions necessary for adding courses and sections determined to be in high demand. The vice provost for academic affairs created a committee to monitor and disburse the fund. The committee includes associate deans of undergraduate education from the five largest colleges on campus as well as staff from the offices of the registrar and the provost.

The committee first used the historical analysis to identify course sections to be added to the list of fall course offerings. Given the new availability of Banner student data and enhanced timetable reporting capabilities offered by Ad Astra/Platinum Analytics, the committee began to think of additional ways to use data to support student success.

Beginning in summer 2012, the SIF committee decided to focus on registration that occurs during freshman orientation. Analysis of courses taken by the previous freshman cohort identified the most popular courses as well as the most common course combinations taken by first-time freshmen. Previously, the advising community had provided anecdotal accounts of needed seats for freshmen courses.

This was the first effort to examine actual registration in real time and to identify trends in order to make decisions about course offerings. Daily snapshots of freshman registration were pulled from Banner and analyzed against the list of bottleneck courses. This enabled the SIF committee to add sections as existing sections filled, with the result that students who attended later orientation sessions could build their schedules without the frustration of closed courses. As the fall semester began, advisors reported that they had been able to help all freshmen successfully build schedules that met the requirements of their majors. In its first semester in existence, the Strategic Instruction Fund created 96 new course sections with a total of 6,133 seats.

The daily enrollment snapshots also allowed for the creation of an enrollment trend evaluation tool for registration: daily enrollment counts are represented graphically so the SIF committee knows at what point in the registration cycle certain courses reach capacity. Over time, UT can use this information to forecast the timing of adding sections and reducing those that do not fill at the expected rate.

Like many colleges and universities, the University of Tennessee’s focus on more comprehensive data-driven decision making is evolving. The fall 2013 semester will bring significant change with the implementation of strategic initiatives and policy changes intended to support retention, graduation, and student success: Our use of Platinum Analytics is expanding to include degree audit information; the tuition model for full-time undergraduate students is changing; and the University is implementing its first universal tracking system (uTrack) for undergraduates.

UT has used degree audits at the undergraduate level for many years, but the Degree Audit Reporting System (DARS) has served primarily as a tool for advising and graduation clearance, with little internal application to broader enrollment or timetabling decisions. Although DARS certainly has supported increased efficiency in the course selection and academic plans of individual students, only now, with the integration of Platinum Analytics, is the University beginning to harness DARS data to enhance forecasting capabilities. In addition to evaluating historical data from prior course offerings, capacities, and actual enrollments, SIF members will be able to review data based on students’ actual program needs. For example, a department historically has offered 120 seats across four sections of a course but the program analysis determines that 230 students must complete the course and have fulfilled any prerequisites, the subsequent program analysis likely would recommend offering additional sections of that course.

We look forward to a future feature of the program analysis function that will include a predictive component—weighting the likelihood that a student will take a particular course from a series of options based upon historical course demand. Currently, if a student must select one course from a list of four to fulfill a requirement, the system will calculate a 25 percent likelihood that the student could take each course; however, if, historically, 80 percent of students take Course A, 10 percent take Course B, 6 percent take Course C, and 4 percent take Course D, then predictive program analysis would weight the courses accordingly, and the projected need would reflect the adjusted numbers in favor of Course A.

An ideal solution not only would incorporate historical demand and future program requirements but also would allow students to contribute their own predictive data by planning personal academic timelines that could factor in with the scheduling recommendations from Platinum
Among the values that comprise the university’s definition of the “Volunteer Spirit” are “transparent and data-informed decision making” and “wise management of resources and infrastructure,” both of which are advanced by the initiatives described here. We will continue to support these values by improving data integrity on campus, developing comprehensive enrollment management strategies, and exploring opportunities to strengthen campus efficiency and effectiveness. These actions clearly support the Vol Vision and will guide the University of Tennessee in its journey to becoming a top-25 public research university.

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A Hearty Handshake: Improving Collaboration between Admissions Officers and Registrars

By Robert Boggs, Linda Dammer, Edward Trombley, and Melanie Winter

It is revolutionary for many admissions directors and registrars to consider that they might work together as allies. At the risk of oversimplifying, admissions department staff often are considered the “quantity” people, trying to seat as many applicants as possible and so putting the need for student numbers over the need to find the best applicants whose education-related goals “fit” the particular institution. By contrast, registrar’s office staff often are cast as the “quality” people—those who spend their days combing through arcane university policy manuals seeking reasons to disqualify the applicants admissions staff have advanced.

Representatives of three different institutions—a small, residential, traditional liberal arts university; a large, for-profit postsecondary career education company; and a large private aeronautical university with more than 150 locations worldwide—came together at AACRAO’s 98th annual meeting to discuss how improved collaboration between admissions officers and registrars has worked for them.

Shenandoah University is a small, private liberal arts institution in Winchester, Virginia. The University comprises six schools and offers more than 90 undergraduate and graduate programs. The school’s highest enrollments are in the Conservatory and health professions programs. Undergraduate programs are offered at the Shenandoah Valley campus, though the University offers online courses in some programs of study. Corinthian Colleges, Inc. (CCi) is one of the largest postsecondary career education companies in North America. CCi offers accredited short-term diploma programs and associate’s, bachelor’s, and master’s degrees. Its main program areas include health care, criminal justice, business, information technology, transportation technology and maintenance, and construction trades. In addition, CCi offers online degree programs in business, accounting, criminal justice, paralegal, and information technology. Embry-Riddle Aeronautical University, the world’s largest fully accredited university specializing in aviation and aerospace, is a nonprofit, independent institution offering more than 40 baccalaureate, master’s, and Ph.D. programs through its four colleges: Arts and Sciences, Aviation, Business, and Engineering. Embry-Riddle educates students at residential campuses in Daytona Beach, Florida; Prescott, Arizona; and through the Worldwide Campus, with more than 150 locations in the United States, Europe, Asia, and the Middle East. The University is a major research center, seeking solutions to real-world problems in partnership with the aerospace industry, other universities, and government agencies.

Although the mission, goals, and structure of these three institutions differ, each institution has a traditional admissions and registrar’s office. The two offices and their
teams may seem at odds, but they share many of the same goals. For example, every member of the admissions team has the overarching goal of finding qualified applicants to admit to the institution and helping guide said applicants into the student phase in the hope that they eventually will graduate. The registrar’s team assesses incoming credit for transfer, protects student information, and provides complete, accurate, and truthful information concerning students as well as institutional policies. These unlikely allies can find ways to work together to achieve their shared goals—*i.e.*, enrolling qualified applicants and seeing those students graduate. However, both offices must honor their commitment and sustain their efforts.

Four key principles are at the heart of the matter:
- **organizational structure;**
- **communication channels;**
- **shared goals; and**
- **collaboration.**

Organizational structure is an issue when admissions and registrar’s offices report to different vice presidents. The collective experience of the panel was that in such cases, individual vice presidents had their own priorities or agendas, and they were not always aligned with the other vice president’s priorities or agenda. Presenters from Embry-Riddle, where the admissions and registrar’s offices report jointly to a single associate vice president, believe the shared reporting structure allows them to better align their departments as they share common university-level goals. This was not the experience at the other presenting institutions.

At institutions without a shared reporting structure, relationship building fell to the director of admissions and the registrar, who would have to develop an open style of communication and, ultimately, foster collaboration. Once a trusting relationship between the managers was established, one helpful activity was interdepartmental meetings at which matters both large and small that affected the departments were shared. Presenters suggested starting small, perhaps with the director or associate director of admissions attending a registrar’s office meeting (or vice versa). Thus, each team could begin to work alongside and trust the other; when larger interdepartmental meetings or projects are scheduled, they will be more productive because the groundwork of collaboration already will have been established. Proximity also helps: While it may not always be possible for the two offices to be located in the same space, in the same building, or even on the same side of campus, efforts by the director of admissions or the registrar to set up a meeting or to share a lunch will go a long way toward fostering a relationship that ultimately will help each department accomplish its work and achieve shared institutional goals.

In its simplest form, communication is a transaction between two parties to influence an outcome. The importance of directors of admissions and registrars communicating cannot be overstated; managing communications is as important as developing relationships. As managers, we spend the majority of our days communicating with administration, faculty, and staff, so we have to be sure that our communication channels are open, free, and clear of distractions. Research shows that having a clear communication channel within an organization streamlines the functions of the institution and helps achieve shared goals. Raina (2010) postulates that internal communication activities are a key determinant of how effectively organizations meet their shared goals. Although there is some divergence of goals in that admission’s officers want to enroll students while registrars want to ensure that institutional policies are upheld, the shared goal is for accepted students ultimately to graduate.

Collaboration is the culmination of understanding organizational structure, developing open communication channels between the admission’s office and the registrar’s office, and living shared goals. Embry-Riddle Aeronautical University Worldwide staff suggest that if admissions adjusts its targets and goals to focus on enrolling better-screened and better-qualified candidates—even if the result is fewer new enrollments—then it is worth the effort. Retaining qualified students is easier and a better use of resources and completion rates increase when candidate pools are narrowed to the most qualified. To accomplish this, Embry-Riddle’s admissions office is responsible for collecting applicants’ academic documents (only official copies are accepted), and candidates do not advance in the admission process until their complete files have been compiled.

Embry-Riddle Worldwide’s director of admissions and registrar attribute their close working relationship to many factors:
Both report to the associate vice president of marketing and enrollment management, which facilitates collaboration and shared goals.

They actively seek opportunities to bring their departments into contact with each other through guest presentations at each other’s team meetings and shared enrollment management functions.

Both managers inherited their teams when they assumed their current roles. While they appreciate the institutional knowledge the teams possess, the team members may resist change and feel invested in the status quo.

They take advantage of as many opportunities for cooperation as possible in order to forge and maintain a close working relationship. They discuss unusual student cases as well as policies and procedures, and they pursue joint committee work—particularly the Academic Standards Committee, which reviews petitions to enter or re-enter the University when a student fails to meet admissions standards or has been dismissed.

Collaboration during the recent transition to a new student information system also proved beneficial as it promoted understanding of how processes flowed from admissions to the registrar’s office and of the impacts of system decisions on both working environments.

Understanding the institution’s organizational structure and managing its various communication channels helps the admissions and registrar’s offices identify shared goals and promotes collaboration. Ultimately, this benefits students as much as the University.

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The AACRAO 2011 Academic Record and Transcript Guide

For over 60 years, AACRAO has provided best practice guidance to records professionals on keeping, protecting and disseminating transcript information. The AACRAO 2011 Academic Record and Transcript Guide is an up-to-date reference on the integrity, ease of interpretation, and technological and privacy aspects of transcript transmission. In addition to the usage of more than 50 typical database and transcript elements, the book discusses standards for electronic data storage and security training for staff; notation of SSNs, academic and disciplinary actions, and course mode of delivery on the transcript; requirements for change of name and gender; and transcripting nontraditional work and CEUs. Also included are results from AACRAO’s 2009-10 membership survey of current transcript practices and opinions.

ITEM #0131 | $65 MEMBERS | $90 NONMEMBERS

SEM in Canada: Promoting Student and Institutional Success in Canadian Colleges and Universities

Canadian colleges and universities face distinct challenges in financial environments, demographic shifts, competitive forces, and public policy decisions. SEM in Canada addresses these concerns and tells the Canadian SEM story through the experiences of 30 professionals in the field. This comprehensive guide describes how Canadian colleges and universities are using strategic enrollment management to improve student and institutional outcomes. Institutional administration, financial strategies, and key student experiences (e.g., first generation, Aboriginal, international, transfer, francophone) are among the major SEM components covered. This 16-chapter, 357-page book illustrates that Canadian institutions have not only created their own version of SEM, but one that furthers the profession in the U.S. and abroad.

ITEM #0132 | $55 MEMBERS | $77 NONMEMBERS

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FERPA Q&A is a compilation of questions posed to LeRoy Rooker, AACRAO Senior Fellow and former director of the Department of Education’s Family Policy Compliance Office. To submit your FERPA-related question for the next issue of College and University, e-mail Jessica Montgomery at jessicam@aacrao.org.

Our community college has entered into the world of dual credit with local high schools. As such, we often have parents who call wanting information on their high school student. Our college has taken the stance that once (high school students) begin college, they are held to the same standard as the college students. Our policy doesn’t state any special accommodations for high school students, and in fact, we’ve instituted a FERPA permission form that the student can sign that gives the parents permission to speak to us about their college matters. If that is on file, we speak with the parents... [However], someone from our state governing body said that according to FERPA, we could speak to the parents regarding the high school students’ college records. Can you help explain what the college requirements might be so that we manage this issue correctly?

FERPA applies to both elementary/secondary schools as well as postsecondary institutions. FERPA rights belong to the parents until a student turns eighteen, or attends a postsecondary institution at any age. Thus, FERPA rights transfer to a student, including dual enrolled, who is attending a postsecondary institution. Generally a signed consent is required to share student education records with another party (See section 99.30 of the FERPA regulations). However, there are exceptions to the signed consent requirement under which an institution may, but is not required to, disclose education records without the consent of the student. One of those exceptions is to parents of a dependent student. This exception is found in section 99.31(a)(8) and conditions any disclosure on the student being claimed on the parent’s income tax return. If this condition is met, the institution may disclose any information from the student’s education records to the parents. I hope this is helpful. If you have the 2012 AACRAO FERPA Guide you can find the latest FERPA regulations in Appendix B, starting on page 151.

Currently, if students don’t get a yearbook photo, we use their Student ID photo for the yearbook. Is there any FERPA concern with doing this? Should we be getting a waiver from the student allowing us to use their ID photo?

If you have photographs as a “directory information” item, then you would only need consent from those students who have opted out. If a photo is not so designated, then you would need the consent of any student whose student ID you plan to add in the yearbook.
Since [X] University closed, a number of our sister schools are attempting to help our students complete their degrees in a timely manner. [Y] University has asked that we supply them with the names and addresses of our former students who have not completed degrees so that they can send them information about their completion program through our Memorandum of Understanding. Would it be a FERPA violation to release their names and addresses?

[X] could forward information on behalf of [Y] to those former [X] students who did not complete their degrees. However, you would not be able to give the names of those students to an outside party absent consent from the students or meeting one of the exceptions to signed consent found in section 99.31 of the FERPA regulations. Under the “directory information” exception you could provide the names and addresses of all the students who had not opted out of directory information but you could not combine that with the requested non-directory (no degree completed) information. The MOU you mentioned would not permit the institutions involved to circumvent FERPA by sharing student education records without a consent or meeting the conditions of one of the section 99.31 exceptions.

For additional resources on FERPA, visit www.aacrao.org/ferpa.

About the Author

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Predictive Analytics for Student Retention: Group vs. Individual Behavior

By Michael Davis and Karl E. Burgher

In today’s highly competitive student market and era of enhanced accountability at all levels, student success is at the forefront of every college and university strategy. One aspect of student success strategy is the increased use of tools to help faculty and staff make accurate and quick decisions about individual student intervention (Miller and Tyree, 2009; Miller and Herreid, 2010). Many software vendors and consulting companies offer services to help individuals make these decisions in a more timely and informed manner. This is a complex task. This paper focuses specifically on our ability to predict individual and group students’ success.

Using statistical analysis to predict the behavior of filtered groups of students is far more effective than using it to predict the behavior of individual students. It appears we simply do not know enough about the individuals to make accurate isolated predictions. This is extremely relevant to our work with student success strategies as we add microanalysis and actions to our suite of student retention efforts. Increasingly, offices are adding surveys, coaching, mentoring, and other CRM-like methodologies based on individual student probabilities of success. While these are important efforts, this paper points out just how careful we must be in assessing whether we are randomly improving retention or are intervening in the most efficient manner.

Using data from a mid-sized public university, we estimate the probability of each in-coming student returning for the spring semester. The probabilities are based on an estimated model using previous multi-year class retention data. Our predictions of the size of the returning class and of various filtered groups of students are quite accurate as error components tend to offset. However, predicted probabilities for individual students are not particularly useful. Perhaps the most problematic element associated with individual prediction is that there can be little variation between individual student behaviors at any particular university, with the result that most students have a fairly similar predicted probability of success (return). Therefore, the problem is less that our overall predictions are not accurate than that we are not able to differentiate among individual students given available information. These results are true despite being able to identify a number of variables important in predicting overall group and population retention metrics.

DATA
An initial goal was to predict the class size for spring 2011. To do so, we examined student behavior for the preceding three classes (2008, 2009, and 2010). By using multiple years of data, we increased the sample size, but we also may
have introduced issues related to using the same data over a number of years. For example, the biggest problem would be if the university changed its behavior as to which types of students it admitted or the percentage of students it admitted across different years. If this were the case, then we would have to introduce variables to reflect these differences. As far as we could tell, there were no major changes in the admissions policies or class characteristics during the three years of the data sample or in the fourth year (2011), results for which we attempted to predict. That said, 2010 had an unexplained lower retention rate than the previous two years. This seems to have been an anomaly as the results for the class admitted in 2011 were more similar to those for the 2008 and 2009 incoming classes.

We separated the sample into two groups and analyzed them separately: Students were classified as either conditionally admitted or non-conditionally admitted. Students with a GPA of 2.5 or above were automatically admitted to the university; those with GPAs less than 2.5 were examined for admission on the basis of the rest of their admissions profile, including ACT scores and other factors. These two groups of students were similar in some ways and different in other ways. Non-conditionally admitted students generally were better prepared for college than the conditionally admitted students, but many of the traits that were important for success for one group were important for success for the other near the cutoff of a 2.5 GPA (± 0.30 GPA).

The biggest difference between the two samples was that the non-conditionally admitted students were less subject to selection bias. Because these students had only to attain a minimum high school GPA of 2.5 to be admitted, there was no concern that an admissions counselor chose to admit them on some unknown basis. By contrast, the potential did exist for the conditionally admitted students to not be successful; admissions counselors could already be aware of a factor that might be considered a “red flag.” Counselors therefore admit only the best students with this characteristic, with the result that it does not show up as a negative indicator. Among unconditionally admitted students, there is no selection bias of this type.

The original sample size for years 2008–2010 for conditionally admitted students was 1,144 and for non-conditionally admitted students, 4,368. In the final model, some observations for which data were missing were removed. The 2011 class size for which we made predictions was 232 conditionally admitted students and 1,976 non-conditionally admitted students, for a total class size of 2,208.

We began with an extensive list of possible variables, including demographic variables such as ethnicity and gender; variables to measure potential ability, such as high-school GPA and ACT score; and variables to measure “connection to the university,” such as whether students applied late or were the child of an alumnus/a (i.e., a legacy). Students may have received any of a number of different types of high school diplomas, including one that served as a proxy for any diploma earned at a high school outside of the state. This variable often proves significant; typically, we interpret it as a proxy for out-of-state student behaviors that can include a set of distance (i.e., homesickness) and tuition effects.

We restricted analysis to information available to admissions staff at the time of selection. Additional data along the matriculation timeline—including financial information and when the student attended orientation—may also be analyzed. Eventually, our reporting will include these variables, and the survey results from the first few weeks of class of how students are performing and feeling. However, the original purpose of our study was to examine the conditional selection processes of the admissions office and to identify at-risk students in the total population prior to orientation and arrival on campus for the fall semester. We therefore limited our analysis to those variables available at the time of application.

**METHODOLOGY**

The decision to enroll in the spring semester is discrete and thus can be assigned only a value of 0 or 1. It would be incorrect to use the standard regression technique, Ordinary Least Squares (OLS), for the estimation given these types of variables, so we used a Logit model in which y was the dependent variable, z the explanatory variables, and β the coefficients (see Figure 1, on page 65). The Logit model has been used by other researchers examining student success, including Fike and Fike (2008) and Jamelske (2009).

In the results section, we present odds ratios for the coefficients. The odds ratios inform us about how a one-unit increase in the explanatory variable increases (or de-

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1 Students typically must have at least a 2.0 high school GPA to be considered for conditional admission. However, some students in the conditional admission sample had GPAs less than 2.0.
increases) the probability of success, i.e., of re-enrolling in the spring. Odds ratios greater than 1.0 mean that an increase in the variable signifies an increase in the likelihood of success while those less than 1.0 mean that the variable indicates a decrease in the probability of success.

Because many of the variables may be correlated, we used model-selection techniques to derive a parsimonious model. In order to determine which variables to include in the final model, we used p-values. P-values are a way of describing information from the t-statistics and represent the probability that we could find a coefficient of that size or greater if the variable were providing no information—i.e., that the coefficient for that variable should be 0.0. We began with a full model and then removed variables that had p-values above 0.5 until all remaining variables had p-values less than 0.5. While choosing a p-value of 0.5 was arbitrary and perhaps overly inclusive in terms of which variables remained in the model, we wanted to capture as much information as possible. We did not follow this procedure with the control variables for gender and ethnicity, which we included regardless of p-value.

Essentially, we took a hybrid approach between a structural model (in which we would have chosen the variables ahead of time and kept them all in our regression regardless of significance) and a completely statistical approach to choosing which variables to keep in the model. We prefer to follow the structural approach which is based on a priori student behavior. However, many of the variables in the model are correlated in ways that are not obvious a priori. Leaving two variables that are highly correlated may suggest that neither is important when that is not actually the case. We therefore used a partial model selection approach to remove the most insignificant variables.

Once we had estimated a parsimonious model based on the 2008–2010 classes’ fall to spring return rates, we input the data for the 2011 class. This gave us the predicted probability of each student returning for the spring 2012 semester.

**PREDICTIVE MODEL**

Table 1 (on page 66) includes the results from estimating an equation for the 2008–2010 classes. We did not include a class-year indicator variable, having assumed, thus, that 2011 was like all other years (i.e., the “average year”). For the unconditionally admitted students, we included variables representing the schools at which they intended to enroll. Conditionally admitted students are not allowed to declare a major. If we had estimated the entire data sample of conditionally and unconditionally admitted students, we would have included “conditionally admitted” as another category similar to school major. However, we separated the two groups in the analysis.

Odds ratios greater than one implied that the variable denoted that the student was more likely to enroll in the spring and odds ratios less than one implied that the student was less likely to do so. Some variables were dropped in the model-selection process (not all are included in Table 1). All variables in the table were included in one or the other model.

Many of the results were as one would expect: A higher high school GPA proved a better predictor of returning in the spring, as was the number of previously earned credit hours. Connection to the school was likely also important as late applicants were less likely to remain at the school whereas children of alumni were more likely to stay. An interesting finding from other preliminary work was that while legacies were more likely than non-legacies to re-enroll in the spring of their freshman year, they were just as likely/not likely to graduate—in four, five, or six years—as the general population.

Several other coefficients were less intuitive. For example, whether a student was Hispanic seemed to be a large positive indicator for conditionally admitted students but a significant negative indicator for non-conditionally admitted students. These two groups probably should not display such divergence for a variable of this type and thus appear erroneous. (These results likely were due to the study’s small sample sizes, as only 2 percent of the sample is Hispanic.)

We find that not matriculating to college immediately after having graduated from high school is a negative indicator. We do not know the true reason behind this variable, but we can speculate as to a couple of possible causes. Perhaps the students who took the year off started college
less prepared since they were a year away from school. Another possibility is that on average they are less motivated to attend college and that is why they did not go straight to school. We suspect that this finding may be specific to this institution and should not be generalized.

A proxy diploma was assigned to all out-of-state students. This variable seemed to be a reasonably good indicator that the student would not return for the spring semester and may in fact be a reflection of distance (i.e., homesickness) or perhaps of differential tuition costs (i.e., tuition is higher for students from out of state). It also might be an indicator of students who have a harder time connecting to the university than their more local classmates.

RESULTS

Table 2 (on page 67) displays in four categories those data for the students who enrolled in fall 2011. In the upper left cell is the number of students we predicted would not enroll and who did not enroll. The cell to the right includes those students we predicted would enroll but who in fact did not enroll. The cell to the right includes those students we predicted would enroll but who in fact did not enroll (n=63). The next row displays the numbers of students who did enroll. On the right is the number we predicted would enroll and who did. The upper-left and lower-right cells (6 and 160, respectively) were correct predictions whereas the lower-left and upper-right were incorrect. The last row presents

<table>
<thead>
<tr>
<th>Variable (Number of Observations)</th>
<th>Conditionally Admitted (1,130)</th>
<th>Conditionally Admitted (1,130)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>Standard Error</td>
</tr>
<tr>
<td>Applied for Admission after March</td>
<td>0.830</td>
<td>0.173</td>
</tr>
<tr>
<td>Applied for Admission after May</td>
<td>0.668</td>
<td>0.230</td>
</tr>
<tr>
<td>Female</td>
<td>1.094</td>
<td>0.157</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.544</td>
<td>0.691</td>
</tr>
<tr>
<td>African American</td>
<td>1.038</td>
<td>0.160</td>
</tr>
<tr>
<td>High School Graduation Year &lt; Full-Time College Start Year</td>
<td>0.525</td>
<td>0.163</td>
</tr>
<tr>
<td>High School GPA</td>
<td>5.130</td>
<td>1.898</td>
</tr>
<tr>
<td>High School Size</td>
<td>1.001</td>
<td>0.0004</td>
</tr>
<tr>
<td>ACH Diploma</td>
<td>Omitted¹</td>
<td></td>
</tr>
<tr>
<td>Out-of-State Diploma</td>
<td>0.402</td>
<td>0.107</td>
</tr>
<tr>
<td>Pre-Application Hours Completed</td>
<td>1.113</td>
<td>0.053</td>
</tr>
<tr>
<td>Attended Boys or Girls State</td>
<td>Omitted¹</td>
<td></td>
</tr>
<tr>
<td>Summer Honors</td>
<td>0.546</td>
<td>0.344</td>
</tr>
<tr>
<td>Child of Alumnus/a</td>
<td>1.545</td>
<td>0.585</td>
</tr>
<tr>
<td>General Education Diploma</td>
<td>Dropped²</td>
<td></td>
</tr>
<tr>
<td>Maximum ACT Score</td>
<td>Dropped²</td>
<td></td>
</tr>
<tr>
<td>Sum of Extra-Curricular Activities</td>
<td>Dropped²</td>
<td></td>
</tr>
<tr>
<td>21st Century Scholar</td>
<td>Dropped²</td>
<td></td>
</tr>
<tr>
<td>Intended Major in Business School</td>
<td>NA³</td>
<td></td>
</tr>
<tr>
<td>Intended Major in Health Studies</td>
<td>NA³</td>
<td></td>
</tr>
<tr>
<td>Intended Major in Exploratory Studies (Undecided)</td>
<td>NA³</td>
<td>1.125</td>
</tr>
</tbody>
</table>

¹ Omitted: Either all of the observations having that characteristic enrolled in the spring or did not enroll. Both the variable and observations were removed.
² Dropped: The variable was removed because the p-value associated with the variable when it was included was greater than 0.5.
³ NA: Not applicable
the sums of our predictions, and the right-most column presents the total number of actual outcomes.

The cut-off we chose for a successful prediction to enroll was 50 percent, as is customary. We chose this percentage because students below that percentage were predicted to be more likely to not enroll than to enroll. (For example, we would predict that a student with a 30 percent probability of enrolling would be more likely to not enroll than to enroll. If that student were to re-enroll for the spring semester, we would classify our prediction as a miss.)

We identified probabilities of returning of less than 50 percent for nine students. Only three of the nine actually returned. In one sense, we call all of those students “misses” for our model. Yet further consideration suggests that we actually were predicting that on average, each of those nine students had one-third of a chance of re-enrolling for the spring semester. In fact, one-third of them re-enrolled, so the percentage was quite close to the prediction (see Table 4, on page 68).

Nevertheless, this information is not particularly useful: A model that distinguishes only nine students (3.9%) from 223 students does not have much value in making decisions about whom to admit or whom to monitor after matriculation. For example, if the university devoted additional resources to those students such that they returned, the university would only have “saved” six students. It might actually have been better off devoting resources to the other 223 students as well. Saving an additional 10 percent of the “predicted to enroll” students who did not actually enroll is just as efficient as saving 100 percent of the “predicted not to enroll” students who actually did enroll. Such results would argue for rigorous advising and robust student services for all students, not a selected subset of them.

Predictions regarding the unconditionally admitted students were not as accurate (see Table 3). Although the “predicted to enroll” group had a higher retention rate (1,662/1,963, or 84.7%) than the “predicted to not enroll” group (10/13, or 76.9%), the rates of the two groups are not that different. The high retention rate for the “predicted not to enroll” students suggests that our model did not choose the “predicted not to enroll” students very well. (Consider that a model that would predict that all students would re-enroll would have done better [1,672 — or 10 + 1,662 — correct predictions versus our model’s 1,665 [3 + 1,662].] These results suggest that spending resources broadly would be more effective than expending them on a specific subgroup of students.

This result is more disappointing than that regarding the conditionally admitted students. Because the data set was larger, we expected it to return more accurate results. However, given that high school GPA is the variable that most clearly predicts success in college and that these students by definition had GPAs greater than 2.5, the number of students with prediction probabilities of less than 50 percent was only thirteen. We predicted 5.6 of those students (43 percent of thirteen) would return, and ten did.

One positive and perhaps useful result is that our predictions for the conditionally admitted students were more accurate. These are the students the university has more control over admitting, so predictive models for this class of students would be more useful to the admissions office than predictive models for the other group.

Table 4 shows the predicted and actual probabilities of retention for a number of subgroups. It takes into account

---

**Table 2.** Outcomes for Conditionally Admitted Students  

<table>
<thead>
<tr>
<th></th>
<th>Predicted to not re-enroll</th>
<th>Predicted to re-enroll</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did not enroll in spring</td>
<td>6</td>
<td>63</td>
<td>69</td>
</tr>
<tr>
<td>Did enroll in spring</td>
<td>3</td>
<td>160</td>
<td>163</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>223</td>
<td>232</td>
</tr>
</tbody>
</table>

**Table 3.** Outcomes for Non-Conditionally Admitted Students  

<table>
<thead>
<tr>
<th></th>
<th>Predicted to not re-enroll</th>
<th>Predicted to re-enroll</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did not re-enroll in spring</td>
<td>3</td>
<td>301</td>
<td>304</td>
</tr>
<tr>
<td>Did re-enroll in spring</td>
<td>10</td>
<td>1,662</td>
<td>1,672</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>1,963</td>
<td>1,976</td>
</tr>
</tbody>
</table>
Table 4.
Predicted versus Actual Probabilities for Various Subgroups

<table>
<thead>
<tr>
<th>Group or Subgroup</th>
<th>Probability of Retention (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Everyone</td>
<td>82.1</td>
</tr>
<tr>
<td>All Non-Conditionally Admitted Students</td>
<td>83.3</td>
</tr>
<tr>
<td>All Conditionally Admitted Students</td>
<td>71.9</td>
</tr>
<tr>
<td>Conditionally Admitted Students with Predicted Probability of Enrollment of Less than 50%</td>
<td>34.4</td>
</tr>
<tr>
<td>Conditionally Admitted Students with Predicted Probability of Enrollment of Greater than 50%</td>
<td>73.4</td>
</tr>
<tr>
<td>Non-Conditionally Admitted Students with Predicted Probability of Enrollment of Less than 50%</td>
<td>43.0</td>
</tr>
<tr>
<td>Non-Conditionally Admitted Students with Predicted Probability of Enrollment of Greater than 50%</td>
<td>83.6</td>
</tr>
</tbody>
</table>

a more detailed breakdown of the predicted probabilities than simply classifying each prediction as either a success or a failure (as Tables 2 and 3 do).

Table 4 shows that, in general, the model is quite good at predicting the overall probabilities of students’ returning. The exception is the model’s inability to correctly predict the re-enrollment of small groups that are most important and to specifically identify at-risk students, *i.e.*, those with a low probability of success. We suggest that this becomes even more problematic as we attempt to predict individual student behaviors by drilling down to increasingly smaller subgroups. This is the core work of student success offices.

Because the model predicted that students had very high probabilities of returning, we examined the retention probabilities by deciles. Table 5 (on page 69) presents these results for conditionally admitted and non-conditionally admitted students. The breakdown in the model’s ability to make accurate predictions about non-conditionally admitted students is readily apparent. The high probability events are quite accurate, as those with a greater than 90 percent prediction of returning do so at a rate greater than 90 percent. Similarly, those with a greater than 80 percent chance of returning did so at rates of 85.4 percent and 86.1 percent, respectively. However, the model failed to accurately separate out those with a 70 percent, 60 percent, or 50 percent chance of returning: Each of those groups had an actual retention rate of approximately 75 percent. Again, we see that as we enhance the granularity of the analysis we find failure points; as the model failed to predict very well which students were less likely to succeed.

Predictions regarding conditionally admitted students were more accurate across most of the groups. This finding helps validate the results presented in Tables 2 and 3—that is, as admissions decisions were made on increased granularity the accuracy of predictions of student success deteriorated.

**DISCUSSION**

We were best able to distinguish “unlikely to enroll” (for the subsequent spring semester) students from “likely to enroll” students in the conditionally admitted student pool. However, only nine students were in the “unlikely to enroll” category despite the fact that 69 students did not return. Prediction percentages were even worse for unconditionally admitted students: thirteen were in the “predicted to not enroll” category when in fact 304 did not enroll.

In considering conditionally admitted and unconditionally admitted students altogether, we predicted that only 22 (9.13) of 2,208 students (the total 2011 class size) were more likely not to return than to return at a chosen predicted return probability of less than 50 percent. The choice of 50 percent is an arbitrary but common choice for a success cutoff and for modeling of this fashion. With only 1 percent of the students predicted to not return, it proved difficult to assess the model on the basis of how many students did return.

Despite these significant limitations, the model quite accurately predicted the overall number of returnees for
the spring semester. We predicted that 71.9 percent of conditionally admitted students would return, and 70.3 percent actually did so. Similarly, we predicted that 83.3 percent of non-conditionally admitted students would return for the spring semester, and 84.6 percent actually did so. Overall, we predicted an 82.1 percent retention rate, and the actual retention rate was 83.1 percent.

These kinds of results can be extremely useful to CFOs in their predictions of revenue streams. Future research might consider such applications, particularly at smaller schools where the difference between 25 and 50 students enrolling (or not) could make the difference between a very good or a very bad spring.

The overall enrollment predictions described above assessed two items. The first was whether we had included the right variables to accurately estimate the impact of factors that affect a large number of students and student groups. We would argue that we have enough data to accurately predict class size but not enough to predict the success rates of individual students or of groups with less than a 70 percent probability (see Table 4) of re-enrolling for the spring semester. This tells us that very good students do well, and students who are less well prepared have far more uncertain results. (Indeed, this is the experience of most first-year programs.)

The second key to a model of this type is that the retention rates due to unobservable factors must stay relatively constant between the years used to make the predictions and the year under examination. Thus, the model’s slight under-prediction of the overall retention rate likely is due to the poor spring retention rate of the fall 2010 class. Despite having had a very low retention rate relative to previous norms, the fall 2010 class was used to make predictions about this class. Upon examination of the student data between years we saw that the decrease in enrollment likely was not the cause of a subsequent decrease in the quality of in-coming students or of any observable change in student characteristics; rather, it appears to have been a one-year anomaly based on unquantifiable attributes.

We suggest three reasons it is difficult to predict the behavior of individual students despite having a fairly good model for the class as a whole. The first is that other than GPA and less so the test scores; the student body is fairly homogeneous. In addition, all students above a specified GPA are admitted, resulting in further homogeneity of the class. Given these parameters, student risk assessment predictions will be very similar given that GPA, while extremely important, still explains only a small part of any success probability. Second, statistical analysis is based on averages, so most models will be much more useful pre-

<table>
<thead>
<tr>
<th>Predicted Probability (%)</th>
<th>Non-Conditionally Admitted</th>
<th>Conditionally Admitted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>90-100</td>
<td>92.5</td>
<td>589</td>
</tr>
<tr>
<td>80-89.9</td>
<td>85.4</td>
<td>726</td>
</tr>
<tr>
<td>70-79.9</td>
<td>77.6</td>
<td>473</td>
</tr>
<tr>
<td>60-69.9</td>
<td>74.5</td>
<td>141</td>
</tr>
<tr>
<td>50-59.9</td>
<td>73.5</td>
<td>34</td>
</tr>
<tr>
<td>40-49.9</td>
<td>90.0</td>
<td>10</td>
</tr>
<tr>
<td>30-39.9</td>
<td>50.0</td>
<td>2</td>
</tr>
<tr>
<td>20-20.9</td>
<td>NA</td>
<td>100.0</td>
</tr>
<tr>
<td>10-10.9</td>
<td>0.0</td>
<td>1</td>
</tr>
<tr>
<td>0-9.9</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

NA: No students with predicted probability in that range.

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2 The retention percentages may differ because we had to remove from the analysis certain observations that had missing data. For example, students without an ACT or SAT score or who lacked a high school GPA were not included in the prediction sample and therefore should not have been included in the post-analysis.
dicting the behavior of a whole group and even of various subgroups or “filtered” groups than of any individual(s) in the group.3

The last and probably most important reason is that while we can observe certain factors that are important, there is a lot we do not know about individual students. High school GPA (as the literature makes clear) seems to be a very good indicator of ability, motivation, and/or knowledge and, thus, of success in college; however, factors other than intrinsic ability and “book smarts” are very important to a student’s remaining at the university. Factors such as connection to the institution and motivation to attend are only partially observable. That said, many institutions are striving to collect additional information during the application process to enhance their ability to predict (and avert) students’ risk of academic failure (for example see Sedlacek’s (2004) non-cognitive work).

APPLICATION

The results of the current study suggest a number of recommendations for practical application of this work. We believe that these recommendations will be of interest to faculty, administrators, and others concerned with first-year students’ success. They may be particularly useful to those charged with coaching, intervention, and other student success strategies (a relatively new and aggressive line of business). And, of course, we hope this work will prove useful to other researchers of student success.

- Be extremely careful with sensitivity and/or cluster analysis making sure that the filters (i.e., independent variables) are statistically valid prior to making assumptions about various groups of students and the grouping of those students. While it may seem obvious that certain students should be grouped in a specific manner, the math may not hold. It is entirely possible to create student groups that are statistically meaningless even though historically we have “always thought” that a particular group had certain characteristics and significance in common. Often, more analysis is needed than is undertaken. Statistical rigor should be applied to each variable, filter, or sequence of filters in the establishment of student attention groups.

- Be very careful using isolated predictive probability rankings for student intervention based on all valid independent variables. The predictive power of and confidence in the actual probabilities associated with individuals can be quite weak—and sometimes almost meaningless—when the equations are utilized for individuals. Nevertheless, some advocate for this procedure and allocate resources to student success intervention and coaching based solely on each student’s success probability rank in the class (i.e., the strategy is to intervene with all students whose probability of success is determined to be less than X percent for example). In such situations, resources are expended on the basis of poor assumptions even though a more broadly targeted intervention may provide as good or better results. Intervening with many means you will have an impact on some students who need help; of those, some will benefit and may be retained not just for the next semester but through graduation. We sometime confuse success with insight as do those who stock pick in an up market.

- Accept that we often cannot differentiate between students who will and will not benefit from targeted interventions. Using a simple probability ranking may improve student success in that some students will benefit and some retention targets will be hit, but it can also prove a waste of resources. For some students, no amount of intervention either helps at all or can help enough. In addition, any sample may be able to post similar success rates if a culture of student success is initiated and additional students are engaged by intervention strategies. From an experimental design standpoint, as soon as we approach the system and provide benefit somewhere, we alter that control volume and, thus, the experiment. Great advising and generally good service impact all and thus will also impact those in need. Consequently, it may be difficult to determine whether that good service you provided contributed to a student’s retention or whether your intervention strategy applied with good service benefited the student. We must be careful in how we assess our success.

- We sincerely believe that some group modeling can have an impact, and the appropriate discarding of certain variables will reveal which independent variables are important and which sequence of independent variables is important (i.e., clustering appropriately). Then,
we can better allocate additional resources to broad groups of students, ultimately realizing a higher success rate per resource. To reiterate, and be consistent, with earlier statements we want to emphasize that while we maintain with some accuracy of success rates associated with groups, we cannot often determine which individual students in those groups will be successful.

A final direct application of this analysis is to allow for more accurate insight into and modeling (filtered via regression and clustering) of student group success rates prior to collecting first-week data so that group intervention strategies can be managed proactively rather than reactively (i.e., when a student begins to perform poorly or disengages). Like many others, we assert that we all need to address student success before students matriculate, not after. The university featured in this study has begun several such programs. One helps transfer students develop their math skills prior to the start of the semester. Students are assessed, and those who are identified as needing help are invited to participate in a math readiness program. Students who finish this program have higher retention rates. While not quite the same as modeling, appropriate group intervention can improve the effectiveness of targeting resources.

Given the current (and likely long-term) scarcity of resources in higher education, all funds must be allocated in the most efficient manner possible. Students need to be retained—and at the least possible cost (states are now measuring and tracking cost per FTE and the numbers who graduate in four, five, and six years much more closely).

This can be conflicting: Public education institutions should not necessarily maximize net revenue, should they? They should maximize student success through break-even analysis; often, this can mean investing in some students all the way through graduation. Some consultants and higher education providers assert that resources for academic intervention should not be offered to students for more than a semester or two and that we should allocate those resources primarily to input as that gives the
greatest return. Public and non-profit higher education institutions face this conundrum every day.

In our opinion, a public institution should be loyal to the public, i.e., the taxpayer. The ultimate result is good citizens who enhance economic development, vote, and pay taxes and thereby give back to those who gave initially.

CONCLUSION AND FUTURE WORK

Overall, our group and class predictions were quite good. The problem was that individual student predictions proved difficult and often were not particularly useful. Other than a very small number of exceptions, these kinds of models are not able to distinguish between individual students who are highly likely to return and those who are not very likely to return. A logical next step is to add financial aid, institutional orientation, income, and robust co-curricular data to the mix in order to improve our ability to predict individual students’ success rates. We will first consider these additional data in a similar model and then by using a survival analysis technique using pooled data. We expect to report further results of this work in the near future.

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About the Authors

MICHAEL C. DAVIS, PH.D., is Associate Professor in the Department of Economics at the Missouri University of Science and Technology. He received his Ph.D. in economics from the University of California, San Diego (UCSD). He has examined the dynamics of daily wholesale and retail gasoline price movements and the impact of environmental regulations on gasoline price seasonality. He has also studied the economic impact of successful NFL franchises and both major and minor league baseball franchises, extending his research into regional economic impact analysis. A forthcoming paper models spring-training baseball attendance to analyze optimal taxation policy to pay for a new stadium. Davis received his M.A. in economics from UCSD in 1999 and his B.S. in mathematics from the College of William and Mary in 1995. While attending UCSD, he was a member of the Intercollegiate Bridge Championship team.

KARL E. BURGHER, PH.D., P.E., is Chief Strategy Officer and Professor at Indiana State University. Since January 2010, he has managed the implementation of ISU’s five-year strategic plan. Burgher’s research efforts include developing price models for various metal mining sectors, modeling the impacts of sulfur content on coal spot market pricing, examining construction and mining air blast overpressure level prediction using proxy charges, and assessing the societal and economic impacts of mining on small rural western communities. Burgher earned a B.S. and an M.S. (with an emphasis on costing) in mining engineering from Michigan Technological University and a B.S. in economics and a Ph.D. in mining engineering from the University of Missouri-Rolla, where the focus of his research was on metal markets and general equilibrium modeling.

Davis and Burgher have been undertaking modeling projects in a variety of areas for more than a decade. In the last ten years, they have examined tuition discounting, mine waste sampling and experimental design for the U.S. Environmental Protection Agency, the effectiveness of federally funded, state-implemented transportation research, and student success using a variety of data sets. Current data analysis focuses on African American student success strategies. Their approach to data examination is most often based on behavioral analysis using structural modeling techniques.
Lessons Learned from a Life in Theatre

Susan Leigh

Although flattering, it feels somewhat ironic to me that I should give advice to new AACRAO professionals. As I remember it, it was only yesterday when I myself was seeking such advice from seasoned colleagues, trying to find my way, trying to define my role as a newcomer in student records administration. You see, for the first 20 years of my professional university life, I was an academic: theatre performance was at the core of all I did as a professor. During that period, I never anticipated that my professional path would lead to academic administration. From being on stage as a teenager in community theatre, to my B.A. in theatre, to professional equity performing, and then to graduate school for an M.F.A. in acting followed by certification to coach actors in speech for the stage, I had more than 100 production credits before I transitioned into administration. I balanced my work life and my private life between the worlds of professional and academic theater. I moved fluidly between teaching in university conservatories across the country and working in professional theatres. I felt completely fulfilled and blessed because I was able to do everything I loved: teach, direct, coach, and perform. When I accepted a position to teach acting and speech in the Theatre School at DePaul University, I was beyond energized. I started a small “off-loop” theatre in my spare time, earned tenure in three years, and engaged myself in the cultural worlds of Chicago and the Theatre School.

But it was the larger institutional culture of DePaul University that actually turned my head—that got me interested in administration. If you are a professor who is passionate about teaching, as I was, you quickly realize that with hard work, you can have an impact on the lives of your students. And that is powerful and fulfilling! But if you are an administrator who is passionate about student success, you can have an impact on the lives of thousands of students currently enrolled at your institution as well as on new students and alumni. And that can be even more powerful, even more fulfilling! I feel privileged to work in central administration, where I bring my classroom perspective and have the chance to impact so many students as part of my job.

With its strong mission and Vincentian values in which everyone seems to believe, DePaul has an almost palatable—and addictive—ethos. I quickly sought ways to be engaged in the community in any way I could. Faculty committees, research and grants, task forces...this high-level engagement is the match that we talk about in enrollment management when we tell students they will find success when they find the school that best fits them personally. We tell students that they will know when it
happens; in like manner, I felt the systemic pull of engagement and belonging to DePaul’s academic community. For the first time, I wanted to learn all I could about how universities worked—and even more about why this university was so different. The more I learned, the more I cared and committed; to date, my relationship with DePaul has lasted 20 years. Coming here was the best thing I ever did in the course of my career.

So exactly what are secrets to success? I am sure I do not know. Nevertheless, I can tell you what lessons I have learned as an academic—and a theatre person, at that—who came to administration with seemingly different skills and experiences from “the usual.” The greatest lesson is that you bring something unique to the table, so don’t change or adapt in order to be like everyone else. I brought many skills and lessons learned as an artist that one might think totally inapplicable, but I learned that one’s uniqueness, above all, is one’s personal strength, and it will fuel your personal contributions. Don’t be sure that you know all that you have to offer; after all, the best working environment—the one that is your “match”—will draw out things you have learned elsewhere.

**FIND YOUR MATCH! MATCH YOUR PASSION!**

I apologize for sounding Pollyanna-ish, but I can attest to the fact that if you truly love where you work, you will flourish in your career while you are there. If you are in a place that matches your energy and where you work to achieve a shared vision with people you admire, you will relax, feel supported, become your best self, and work from inner strengths that are not accessible to you in environments where you feel you do not fit in, where you cannot relate to others. A critical part of all retention strategies is to make every effort to help new students feel they belong—that they are part of the fabric of the institution—as soon as possible after they arrive. We urge our first-year students to become engaged in the community of learners on campus because that engagement will inspire their academic success. As professionals, we should make the same demands of ourselves; after all, the time and energy we invest in our institution is a deposit against which we can later draw as we build our career. Leadership positions and promotions come because you make a commitment, take advantage of opportunities to learn more about the institution, and, inadvertently, learn about yourself. Energy and engagement make you “present” in the room and attract similar energy, making you stand out.

**BE CREATIVE**

Leaders envision a future and then take others there, negotiating and brokering step by step along the way, building trust even through thick fog, leading the group because they really do know the way, because they can envision the end result. When I was directing, theatres would give me a script and ask me to stage it in their season. I never would direct a play that did not generate pictures upon my first read. If I could envision the world of the play, then I could lead the cast, crew, and designers toward that vision. And with powerful team dynamics on my side, I could create the world of the play. It is the same in leadership roles within the academy: I must be able to see a way to accomplish the end, to define the success of projects, new initiatives, implementations, strategic planning, etc. Be creative in your visions, and find new solutions to old issues. And if you can help others see what success looks like, they will help you achieve it (they may even help get you the funding!).

**PLANNING**

Project planning has become an important part of the administrator’s role because of regular systemic implementations, among other things. Know how many staff take how many hours to get the job done now; how staff time on task will decrease once you implement the new solution; and how you will reallocate their time. With old-fashioned observation and math, you can build a case and then provide proof of concept. I know how many hours I need to rehearse a play with a cast before opening a show. And I have found dependable ways of measuring time on task in student records processing so that we know what and when we can deliver on a project, even in the midst of all the other things we do. Always have contingency plans for everything you do, because you never know… you could be wrong. Keep that new plan to yourself, but be ready to implement it quickly should you discover that you cannot do what you promised. You see, more and more, the new directions we take in academic administration involve collaboration across and among offices, and sometimes their resources and enthusiasm for a project may fail to match yours.
NEGOTIATING AND BROKERING

Theatre is a collaborative art which cannot happen with one lone artist. Even one-person shows have a crew behind the scenes that makes things happen, even if it never appears on stage. I learned early how to focus on shared objectives in rehearsal and production while finding my own unique individual way to contribute to the whole. This kind of collaborative experience clearly has shaped me, because even in my current work, I look for that obligation to partner that is inherent in theatre as an art form. Others may not have had comparable experiences where the end product belongs to so many—where it rests on the success of so many individual pieces and you have to be patient. A symphony of small decisions, any major project requires the buy-in of all those who will be affected by its outcome. You have to use high-level negotiating and brokering skills to help others see the benefits, to persuade others to support your vision. It is never easy to convince naysayers, so don’t let others tell you that it is; that said, few other things will give you such a strong sense of accomplishment.

CHANGE

Plan for it, embrace it, get out in front of it, or change will control you! Early in my career, I had the opportunity to work on many new plays. A new script develops right in front of you once you put the script in actors’ hands, but hours of rehearsal can pass before the real direction and shape of the work are revealed. Eventually, everyone in the room knows if a particular scene is working or if it needs to be rewritten or even cut, perhaps because it is pulling the entire storyline off track. Peter Senge has written so much about change and opportunities for change, in particular. He tells us that innovation is not problem solving; rather, it is learning how to do something new. Problem solving merely “fixes” the thing that you have. Whether you are talking about staff hours, implementation of budget dollars, time within the academic calendar, or virtually anything else, you have only so many resources. So if you continue to add things that necessarily will require a portion of those finite resources, then you will need to let go of a process or procedure that you do now. Senge suggests that administrators implement a regular “search and destroy” process—that is, regularly look for things to leave behind in order to make room for the new things. For example, in my office, staff are prompted to regularly question and reflect on what they do. Which processes—in whole or in part—don’t make sense anymore? What might be a better way? Trust those individuals who perform the processes because they really do know when something should be changed. And remember that while the tools change all the time, the values stay the same.

TELL THE STORY

Know your material; learn your lines! “Script” yourself to ensure that you have chosen the most impactful language, and practice until those words belong to you—until you are comfortable speaking them. You must be able to make your points—to tell the story—clearly and succinctly. Use data and not emotion to describe the circumstances, and then allow your listeners to arrive at your conclusion, where you will be waiting patiently for them. The right data used at the right moment will position you and your idea for a timely decision. They will ensure that you will be successful in garnering support—financial as well as ideological.

Tell the story of success by providing data: justify the investment in the project, and demonstrate that you improved the service just as you said you would. If you have to submit a report, be concise. Learn the value of the one-page summary (sometimes that’s all that decision makers have time to read). Years ago, when I was quite new to executive reporting, I felt insulted when, having spent hours writing a long and detailed project report, I was asked by the EVP to distill it to one page. In response, I created a template; I noted when it was successful, and I changed it when it was not. Learn to write a one-pager that accurately explains your project without jargon or emotion and that outlines in the most objective way what you need the leadership to know (or, better yet, what you need them to do). Be sure their action items immediately follow the conclusions!

LIFELONG LEARNING: RESEARCH, READ, AND REFLECT

Research: Be curious! Learn from colleagues on your own campus as well as on others. Pick up the phone, introduce yourself, and ask that question—or invite her to lunch or for a drink. Even though our institutions compete for students, you soon will find that there are professional relationships to be made that will prove extremely valuable. Reach out, and get to know the competition.

Be ready to learn. To succeed in today’s academic environment, you need to develop multiple literacies. Doubt-
less, you will find new ways to solve old problems, to research new systemic solutions, to adapt them for your institutional culture, and to implement them quickly and efficiently. This kind of research and development demonstrates that you are willing to jump in, acquire new skills and competencies, and test your native abilities in ways you have never imagined. You cannot develop realistic expectations for staff members’ use of new technologies if you yourself are unfamiliar with those technologies, so get in there and learn as much as you can.

Make time to read! Look outward. Take time every week to read about academia from a national perspective. What are the best practices nationwide for your area of administration? What are other schools doing that you might replicate on your campus? Can you imagine what take-away might be yours if you were to bring a team for a site visit? (How often do we look to each other for a solution when the best ideas may be within reach but at another institution?) In my experience, colleagues were generous—more than willing to share their successes and challenges; I have tried to adopt the same code of conduct. It is profoundly rewarding to receive help from a colleague; and almost all are willing and able to help.

Reflect: After a project concludes, an especially busy season subsides, or a long and difficult implementation ends, take time with your team to look back and assess what worked well and why as well as what didn’t work and why. Schedule retreats, moratorium meetings, and brainstorming sessions, and draft assessment reports. Plan to combine the team’s intellectual capital in productive ways to determine together how you can “work smarter.”

REVIEWS
Listen and learn from all your critics, whether friend or foe. (Sometimes your enemies more clearly reveal where you should focus your attention next.) Accept all constructive criticism, and be grateful: You will get better if you are willing to listen. Beware faint praise as it will never help you
become a better professional. Be grateful for the standing ovations and raves when they come, but stay focused on student success—not politics—as the critical milestone.

One famous director counted how many patrons left the theatre at intermission; believing them to be too challenged by his work, he claimed their departure to be his success. Retention and graduation rates are our goals in higher education administration, but not at all costs. We want students to be happy with their experiences inside and outside the classroom, so be willing to listen to suggestions of how your area might serve students better. After all, students can vote with their feet and may choose to enroll elsewhere. And unlike my artistic friend, we want them to stay for the second act!

**TAKE SOME RISKS!**

Yes, academic leaders must know certain rules and regulations and ensure institutional compliance, but they also must learn how to think through an exception. Where does compliance end and the spirit of the law begin? Be sure to contextualize what the real impact is on the students involved as well as on the institution. This is a critical judgment; you must know the culture of your institution to understand how risk averse it may be.

**BALANCE LIFE AND WORK**

To maintain the zest, enthusiasm, and boundless energy that you require in your position year after year, you must make sure that you can step away for some personal time every day, every week, and for an extended period or two every year; then you will return to work rested and refreshed. Hope, optimism, and future-mindedness are qualities that successful leaders must possess. If you remember to take time to recharge, you will have the positive energy necessary to lead. Above all, make sure that you have fun at work as well as in your personal life. In the theatre, when things get way too serious, we often remind each other that it is a “play,” after all, and that we should find a way to make the work fun. “Ten-thirty always comes!” was the advice one famous playwright used to give when things onstage were most challenging. Similarly, in academia, this term will end, you will get through it together as a team, and you will get a chance to do better the next time. And we always do! Don’t keep looking back. Instead, anticipate all the good things that are about to come. Keep the vision alive!

**About the Author**

**SUSAN LEIGH** joined DePaul University as faculty at the Theatre School, but is now Associate Vice President for Enrollment Management and Marketing. Susan oversees Student Records and led the creation of the DePaul Central offices, a one-stop for integrated student services that includes a contact center offering students answers to questions about student records, financial aid and student accounts. Susan did her undergraduate study in theatre at Rhode Island College in Providence, and earned her M.F.A. in Acting from Temple University in Philadelphia. In addition, Susan was certified to teach speech for the stage by the late Edith Skinner. Her resume credits more than 100 productions nationally in both professional and university theatre. Most recently, Susan has taught as an Associate Professor in the Women and Gender Studies Department at DePaul, as well as the Study Abroad London Program. Her classes and research focus on the representation of gender onstage.
In the age of globalization, the demand for multicultural educational experiences—from both scholars and the workplace—is on the rise, providing colleges and universities market-expanding opportunities both at home and abroad. Meeting these expectations requires both a solid foundation and the most up-to-date intelligence and methods in the field of international education. That’s why professionals across the country rely on The AACRAO International Guide. Its latest edition, authored by proven experts in the field, is a 23-chapter reference and how-to guide containing:

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- analysis of core issues (such as international recruitment and enrollment management, technology, study abroad, undocumented students, fraudulent documents, and the Bologna Process); and
- practical guidance on vital concerns (such as international credential evaluation, office policies and procedures, undergraduate and graduate admissions questions, community college issues, student visas, and English proficiency assessment).

Education is on the move. Expand your global perspective with AACRAO’s International Guide. Order today!
In thinking about strategic enrollment management (SEM), it seems appropriate to refer to one of the long-standing texts in the field. In The Strategic Management of College Enrollments, Hossler and Bean and Associates (1990) provide a four-part overview of how to create a strong SEM organization on campus.

The book’s four areas of focus are enrollment management in academic settings, the marketing dimension of enrollment management, student retention in enrollment management, and building comprehensive enrollment management systems. Hossler and Bean provide a thorough overview of the field and also provide case studies. The higher education landscape quickly adapted as enrollment challenges emerged and as enrollment management practices became more widespread, having begun to be developed first at Boston College and then at Bradley University.

Today, the term “enrollment management” is common on many college campuses, and the support network for SEM professionals ranges from publications to conferences, institutes, and continuing education programs. One could argue that enrollment management “has arrived” in the higher education community and that the discussion now has turned from the foundational structures of forming enrollment management organizations to how to effectively lead such organizations.

It is a compliment to our profession that we now are examining not only the key components Hossler, Bean, and others have addressed through several decades of research and publications but also how leadership contributes to successful enrollment management.

Thinking about leadership and about how one becomes an effective leader naturally includes a review of the literature. The number of outstanding authors and publications on leadership is virtually endless, but without fail, I return to Warren Bennis and his writings. His text On Becoming a Leader (1989) is classic. In fact, Bennis provides perhaps the best guide to being successful as a leader of an enrollment management organization.

That said, among the names that come to mind regarding leadership in enrollment management are not only Bennis and John Gardner (1990) but also Berra—as in Yogi Berra. Many may not think of Lawrence Peter “Yogi” Berra as an authority on leadership, though he did have a successful major league baseball career as catcher and manager for the New York Yankees; instead, he is best known for his mishandling of the English language. A true leader in the field of enrollment management, David

Leadership: Principle Driven Action

Roger J. Thompson
Kalsbeek once quoted Yogi Berra: “When you come to a fork in the road, take it!”

This may best describe a leadership style long ignored but vitally important.

As an invited lecturer to a graduate student course on strategic enrollment management, I once was asked to describe my leadership style. After a long pause, I offered the idea that mine was the Yogi Berra leadership style. The students roared with laughter, and I chuckled and smiled. Then I began to describe leadership and why Yogi Berra’s quotation about the fork in the road might describe a leadership quality that is critical to success. The underlying message of this quote is to take action; after all, action is critical to leadership.

I refer to this quotation for two reasons: First, it always gets a laugh, which cannot be under-valued given the challenges confronting higher education and society today. Second, and more important, the key to leadership is action, though it sometimes is the most overlooked leadership trait. The most recent literature about leadership includes plenty of discussion about listening, being participative, engaging key stake-holders, utilizing data, conducting research, and more. But not enough is written about acting—not in the George Clooney sense but rather as a leader who makes decisions. In other words, it is critical to get to the decision point and make one. This is what leaders do—ideally, with a strategic sense of where they wish to lead their organizations.

To paraphrase Woodrow Wilson, “A leader’s ears must always ring with the voices of his constituents.” This quotation is another personal favorite because it asserts the importance of connecting with key constituencies and being an engaged and active listener. The statement also speaks to the idea of servant leadership (if long before that term was widely discussed or published). One also needs to remember that after hearing the voices of the constituents, the leader must act and move with decisiveness to meet their needs. Leadership does not happen without action.

Enrollment management organizations often are driven either by crisis or by a specific challenge that may be affecting revenues adversely (Hossler and Bean 1990). In such circumstances, leadership is even more critical.

In the course of leading a number of enrollment management organizations and trying to increase my own leadership abilities, I have learned that the leader must support core concepts critical to organizational success. Where core principles of excellence are absent, the organization will not achieve its full potential; in such circumstances, it is critical for the leader to provide the guidance necessary to create a successful organization built on core principles.

At the University of Oregon, these principles revolve around the student life cycle. The life cycle begins at the time the institution first interacts with a student (or family) as a prospect, defined here as having an interest in the institution, or as a “suspect.” Suspects are students of interest to the institution who may not yet be aware of the institution. In any event, the life cycle begins with the prospect stage and concludes when students become alumni and, ultimately, donors. Becoming a donor is the most important measure of alumni satisfaction; the individual who is willing to donate time, energy, goodwill, or money demonstrates a significant level of alumni satisfaction.

The core principles of successful organizations are similar to those described in the research but are described here in a slightly different form. Successful organizations demonstrate a commitment to these organizational principles:

- Constituent focused;
- Strategic;
- Flexible and nimble;
- Energetic;
- Empowered;
- Team oriented; and
- Communication focused.

To comment briefly on each of these qualities is appropriate given that leaders (in my view, at least) must embrace and create organizations that are strong in each of these areas.

To be “constituent focused” begins with acknowledging that successful enrollment management organizations serve many constituencies, including students, parents, faculty, staff, alumni, government officials, and community members, among others. A natural commitment to service emerges when constituents and their needs are placed at the center of the work. This is crucial for any organization, but it is critical for an enrollment management organization. Taking pride in serving others and being a model in this regard are key components of a strong organization.

It is hard to imagine that any successful organization is not also strategic, but this is critical in enrollment manage-
ment organizations. Focusing on student recruitment and retention and how the size, quality, diversity, international- ality, and other characteristics of the student body affect the institution and the broader community and society is imperative. Enrollment management must be strategic. Given the financial challenges confronting so many institutions in today’s economy, a strategic approach across the various departments involved in enrollment management is fundamental to success. The marketplace for students is changing, so an effective leader must constantly ask how the organization and service “fit.” This is strategic thinking: Continual assessment of marketplace “match” is a fundamental role of the talented enrollment management leader.

Organizations must be flexible and nimble if they are to be successful. This is challenging for institutions of any size, but it becomes more challenging as the scale increases. Leaders must be able to adapt and be nimble as the marketplace, constituent expectations, technology, demographics, and many other factors change rapidly. Finding solutions and moving with agility is difficult in any organization, but the leader must be willing and ready to move quickly when the opportunity to do so arises.

When one considers the role of the registrar’s office just fifteen to 20 years ago, the argument for flexibility and nimbleness becomes self-evident. Consider a financial aid office where new federal regulations virtually require a system migration every year. If the leader operates in this manner, the rest of the organization will follow. Leaders must find solutions; often, this requires being creative, but most important, it requires taking action once a solution has been identified.

Leaders and successful organizations must have energy. The leader needs to bring enthusiasm, excitement, and energy to everything he does—which, in turn, results in the organization itself being energetic. Demonstrating energy and enthusiasm has taken many forms over the course of my career. Years ago, we set some lofty enrollment goals. The team was enthusiastic, and during a fairly routine meeting, I was asked whether we might celebrate with a cruise if we met the new goals. Everyone laughed—myself included—but months later, when the goal had been met, I arranged for the entire organization to set sail on a cruise... on the river that ran through town! Never mind that the “cruise ship” was a local paddle-wheeled boat and that the cruise lasted for hours instead of days. The method may have been unorthodox, but the energy and enthusiasm it generated throughout our organization was noticeable. The message to the team was important, on many levels.

Tenacity and energy move organizations forward; at most successful organizations, the leader plays a critical role in unleashing energy in pursuit of institutional goals. I cannot underestimate the importance of energy and commitment during the course of my own career. Significant change in an institution usually relates to the energetic approach of the leader. Establishing lofty goals and objectives—even those which may seem out of reach—and then accomplishing them generates an incredible feeling within an organization. I have said for years that if you could imbue middle school kids with the feeling of accomplishment that accompanies the attainment of lofty, far-reaching goals, we would not have many of the problems that we have in society today. (In truth, I’m not sure the solution is quite that easy or straight-forward, though I believe it would be a great place to start.) The point is that organizations reflect their leaders: Creating organizations that are based on energy will always serve them well.

When I was in graduate school, a professor argued that the best decisions are made closest to the contact point. Experience has made me believe this all the more. Empowering others is a key leadership trait. One can only accomplish so much individually; but once an organization’s people are empowered, the level of excellence increases.

A few years ago, at another institution, we created an entirely new department designed to meet a series of enrollment goals. I vividly recall the wonderful conversation I shared with the director about how the department would take form, the type of work that would be accomplished, and the difference the department would make to our larger organization and to the university as a whole. I encouraged the director to create, to be imaginative, and to develop the department in accordance with her unique leadership style. I referred to the department as a blank canvas and paints and urged the director to create a masterpiece. In other words, I utilized the leadership principle of hiring the right people; giving them the tools, knowledge, skills, abilities, and support to be successful; and then getting out of the way so they can create the magic. It is important to support and to provide assistance when needed, but if you do your job, your newly empowered leader will develop her own skills and deliver results.
This is empowerment. The results will be wonderful and will include the person becoming a better leader and the organization being better served.

Encouraging initiative and empowerment results in productivity gains and efficiencies. After all, who knows better how to solve a problem than the person closest to it? Through empowerment, the organization itself becomes energized. These two principles support one another.

When one thinks broadly about organizational principles, it becomes apparent that these last two principles—encouraging initiative and empowerment—are critical to those described earlier. Building a team and ensuring effective communication cut across the other areas to support the rest of the principles. Further, each of the aforementioned principles interacts with the others, though communication and a sense of team may do so in a more unique manner. To build a sense of team, a leader must establish trust, cohesion, and common goals and support and reward effective team members. Team building is described throughout the literature on leadership. Yet the reality of team building typically is complicated; rarely does the new leader get to hire all of the members of the team. The challenge often is to build trust and cohesion where they may not have existed previously. This can be challenging. In Strengths Based Leadership, the authors state, “Effective leaders surround themselves with the right people and build on each person’s strength” (Rath and Conchie 2008). Intuitively, we know this, but the leadership challenge is to build the team when the majority of its members are inherited.

Leadership cannot be nurtured either individually or organizationally without strong communication. A leader must support effective communication systems through hard work and constant monitoring of the organization. Effective communication enables and supports all of the other principles of good leadership. Without strong communication, there is no foundation on which to build. Communication also is critical if one is to move students through the life cycle and serve key constituents effectively. Seamless service does not happen without a strong organizational foundation, of which communication is the building block.

These organizational principles must be supported by the leader if the organization is to develop and attain new heights. Certainly, there are other critical factors, such as strong strategic planning processes, clearly articulated and understood goals and objectives, measures of progress and re-assessment, modification and adjustment based on a culture of continuous organizational assessment. But the organization can never fully reach its potential if it fails to establish its core principles. To reach that potential, one must act, and that brings us back full circle to the leadership style I offer for consideration—that of one Lawrence Peter “Yogi” Berra: “When you come to a fork in the road, take it.” In the context of leadership, that means that when action is required, the leader must act.

REFERENCES

About the Author

ROGER J. THOMPSON is Vice President for Enrollment Management at University of Oregon.
The first time I became “the boss” I was sixteen and working at a cheese factory in Vermont. One afternoon the second shift foreman took me aside and said, “I’m putting you in charge of making block cheddar.” There was no more explanation. The foreman was a man of few words, but enough to tell two guys who were older than me that I was now their project supervisor. So for the next month, I lead the process of mixing and raking, draining and cutting, gathering and scooping, and then dumping thumb-size, rubbery chunks of cheddar into tins that got pressed with a hydraulic arm. Like many first bosses, I had no training. Nobody gave me a manual for leadership in cheese making. Even so, the men I led listened to me, the work got done, and the quality of the cheddar won praise from a factory owner whose infrequent appearances on the production floor always sent shivers of terror through the cheese crew.

That summer experience and the college application essays it inspired set me on the path to where now, as vice president for enrollment at a 7,500-student technological university, I lead the divisions of undergraduate admissions, financial aid, graduate admissions, and enrollment operations. As a member of the president’s cabinet, much of the leadership I exercise occurs through oversight and problem-solving committees comprised of trustees, deans, other vice presidents, or all of the above. My current position, when compared to past leadership posts, is more strategic leader than day-to-day manager. In director and deans positions (at Oberlin College and at Reed College), I managed departments. As a vice president, I manage the people who manage the departments. The latter is a different skill, one that leaders acquire only as they move up.

Between supervising the block cheddar project at age sixteen and becoming director of an admissions office, more than 20 years intervened. Counting the jobs I held through college, I toiled on the proverbial lower rungs of the ladder for more years than I have been “the boss.” All those years working my way up the ladder were invaluable, arguably more valuable than a meteoric rise in my twenties to boss might have been, because while traveling the slower road (and enduring the accompanying frustrations) to the leader’s chair, I learned a good deal about how leaders are viewed by the people they lead. Few of us ever get the ideal boss who takes us under wing and teaches us best leadership practices. As a result, there is utility in recognizing what can be learned from the unfortunately more common experience of working under people whose approaches will never appear in any handbook of best leadership practices.

Certainly it would be nice to have all the answers. But the best leaders know that is impossible. In fact great leaders tend to be very good at knowing what they do not
know. I have seen the counterproductive effect of the opposite type of leader, the one who must be the smartest person in every room. Meetings conducted by leaders whose views must always be right and never open to challenge are like sitting in an echo chamber. From this type of leadership, subordinates learn that it is dangerous to think for oneself or to express divergent opinions. Leadership of this type turns subordinates into bobble heads who constantly nod yes and acquiesce to the leader’s demands—even if they can see that their leader is steering the whole organization into a massive iceberg. Lead like this and not only will your employees stop telling you the truth, they will also be constantly looking to jump ship.

It is nearly impossible to lead a division or institution effectively and still act like the working director of its various departments. Although conscientious detail management is a skill prized in project managers, leaders of complex organizations need to step back and let their employees do the jobs they were hired to do. Truly effective leaders advance to ever higher positions because they are not controlling micromanagers who expect everyone under them to do things their way. The leader who cannot let go and insists on acting like the director of every department often misses the big strategic picture due to an unhealthy obsession with the minor details. Most of us have seen this type of leader crash up against the Peter Principle. I recall bosses with desks piled high with all the memos and letters that had to be read and edited en route to approval. In one of those cases, key communications did not go out, numerous program deadlines passed, and departmental output slowed noticeably—resulting in swift termination for the bottleneck-creating leader.

Knowing that your way is not the only way and recognizing that you have knowledge gaps that others can fill are sure signs of leadership self-confidence. Good leaders show this by hiring and promoting people with complementary skills, not simply those who are clones of themselves. They know that innovation occurs in environments where leaders cultivate creative and even divergent ways of thinking, not uniformity. Insistence on a unified front might work when managing a high profile crisis situation, but as a day to day leadership style it is stifling to the people you manage.

Managing by command and control techniques that cultivate fear of and obedience to the leader may work for football coaches or for military officers, but such approaches often prove disastrous in the shared governance environment of higher education. Authority founded on fear of the leader’s power to punish sends many talented people in higher education heading for the exits, engenders shallow loyalty at best, and creates low morale work environments. Leaders who scare others into submission rather than inspiring them to reach for greatness should beware: when the oppressed subjects rise up en masse, the dictatorial leader will fall fast.

There is a big difference between being a friendly boss and being the boss as friend. The boss as friend tends to invite jealously (often unwittingly) as well as charges of playing favorites. Do not for a minute believe that everyone understands and accepts that you and employee X often go trout fishing after work simply because you share an interest in fly rods. In such cases, it will not be long before jealously reveals its ugly fangs and someone accuses the boss of being a closer friend to some (such as the fishing buddy) than to others. The boss as friend may also find that taking corrective action against an underperforming employee elicits a startled and hurt response such as, “but I thought we were friends.” Before falling into the boss as friend trap, remember that the people you lead recognize that you are the boss. If they understand professionalism, they will not expect, nor will they want you, to be their friend. In fact, the expectation that they be the boss’ friend is frequently viewed by employees as a burden. The kind of boss that the institution you serve, and the people you lead, need you to be is one who is firm, fair, and friendly. And the friendly part of firm, fair, and friendly does not mean friend.

Now isn’t it obvious that no one in their right mind would want to practice the misguided approaches to leadership just described? One would think so. Unfortunately, just drawing from my own experiences working for nine institutions over the years, I have seen all of the above types of ineffective leadership approaches more than once. While I cannot write a cure-all prescription outlining exactly how to practice good leadership, I can say with conviction to any new leader, do not act like the bosses described above. Still, getting advice regarding best practices and observing examples of good leadership will only take new leaders so far. Practicing good leadership on the job is the true test.
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In their daily roles, leaders are asked to make the final decision on many matters, even those outside their realm of expertise. Leadership requires making decisions that solve problems, and solving a problem requires understanding the situation from all sides (if that is possible) or at least using the best available information. Recognizing that others may know more about the situation than you do is a prerequisite for solving (rather than needlessly creating) problems. For this reason, good leaders need to temper the tendency toward broadcast mode—admittedly a mode that can inspire and persuade others—to listen actively to what is really going on at the institution.

Listening results in the leader grasping the mood and culture of the institution—and solutions that factor in the mood and culture of the school are usually the most effective ones. Listening shows that the leader understands the significant place that the airing of diverse viewpoints has in educational institutions. Still, grasping the importance of participatory discussion and listening does not translate into leaders needing to operate according to direct-vote democracy. Turning every issue into a community referendum is an abdication of leadership and a sure route to eroding respect in the leader’s authority while begging the question is a leader even necessary. People tend to want leaders to lead, and leading is not giving everybody what they want all the time.

Understandably, leaders approach their new job with ideas and eagerness to move their institution forward. But effective leaders also know to devote significant time in their early days to discovering how and why things operate in certain ways. One failsafe way to get off to a good start is for the leader to go on a listening tour of personal engagement around the community. A listening tour will signal that the leader approaches the new institution with the recognition that it is a distinctive entity with a particular character, culture, and set of attributes to be comprehended, clarified and then factored into any resulting strategic plan for progress. Through the process of eliciting perspectives from around the campus, the effective leader can begin to craft a vision for future accomplishment and build bonds on which consensus and collaboration can be founded.

My concluding lesson for leaders is a bit of a paradox. The best leaders, those who bring together people and resources to achieve progress and surmount hurdles, often do so in ways that make their leadership appear seamless (even invisible), creating an impression of “we did this” rather than “I did this.” To leave their institution in a better place than they found it, the best leaders know that their efforts are truly successful only if progress continues uninterrupted even after the leader, who was the catalyst for the progress, departs.

About the Author
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AACRAO’s Strategic Enrollment Management Endorsement Program (SEM-EP) is designed to provide a well-defined professional development program and career advancement track for enrollment service professionals. For the individual, completion of the program is a valuable addition to a resume and a formal recognition by AACRAO regarding professional readiness to conquer current and future challenges in the field. For the institution, the program will offer a better way to evaluate the preparedness of prospective employees for SEM positions.

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