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Editor’s Note

What does the future hold for enrollment management? Strategic Enrollment Management Conference leader and director of AACRAO Consulting Services Bob Bontrager looks at the demographic, economic, and institutional challenges facing the profession and describes how enrollment managers can lead their campuses in a comprehensive approach to addressing these challenges.

The influence of peers is extremely important to student success and plans for college attendance. Margaret Sallee and William G. Tierney, University of Southern California, describe how being involved in social networks helps students acquire information that can assist them in the accomplishment of their goals including college admission.

The accurate estimate of enrollment yield is critical to all institutions. Small colleges face unique challenges because they may lack the technical expertise to develop predictive modeling tools internally. Elliot N. Maltz, Willamette University, describes the creative approach he undertook to use internal resources to develop an interactive spreadsheet for enrollment management that brought the process of yield management in house leading to dramatic improvements in both operational performance and the achievement of strategic admission objectives.

Dannielle Joy Davis, University of Texas at Arlington, provides a comprehensive review of race neutral admission strategies such as class-based approaches and a comparison to their race-based alternatives.

As administrators begin to formulate approaches for compliance with new U.S. Department of Education regulations for collecting, maintaining, and reporting data on race and ethnicity, Amitai Etzioni, George Washington University, proposes a solution that involves data collection based on country of origin.

Will paper transcripts soon be a thing of the past? J. James Wager, scrip-safe Security Products, Inc., describes the evolution of the digital transcript including recent developments that allow institutions to send transcripts using Portable Document Format (PDF) as trusted digital documents. Thomas Black, University of Chicago, takes this one step further and explains how the University of Chicago implemented their Certified Transcript Service (CTS) and plans to extend the use of digital signatures to a range of other secure electronic documents.

Tracy Jones and Anthony Vaiciulis, University of Central Florida, describe how the institution developed a logistic regression model to help the Division of Graduate Studies predict the admitted students most likely to enroll. UCF hopes to use the model to improve quality, more accurately predict enrollment and financial need, and target recruiting dollars and communications to students who are undecided.


Travis Reindl, AASCU, reviews Strapped: Why America’s 20- and 30-somethings Can’t Get Ahead.

Finally, Brian A. Vander Schee, University of Pittsburgh-Bradford Campus, reviews Gen Xers Return to College: Enrollment Strategies for a Maturing Population, by Jim Black, and AACRAO’s College Recruiter’s Quick Guide.

Louise Lonabocker

Write for College and University

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The Brave New World of Strategic Enrollment Management

A Preconference Paper for the 16th Annual Strategic Enrollment Management Conference

Bob Bontrager

The practice of strategic enrollment management (SEM) can be likened to navigating a ship through uncharted waters. Dating back to the 1970s, the very concept of enrollment management came into being and has since evolved in the face of a steady progression of daunting challenges requiring repeated course corrections. A massive demographic downturn in the early 1980s was followed closely by a sea change in the funding hydraulics in higher education, punctuated by a significant drop in public funding. While many institutions regained their enrollment equilibrium in the latter half of the 1990s, in the new millennium we face a fresh set of obstacles that threaten the well-being of not only our institutions, but American society as a whole.

The context in which SEM practitioners operate is changing again in ways that will forever alter how we do business as institutions of higher education. That context is made up of new or newly-evolving challenges related to demographics, economics, and institutional priorities. These issues have gained increased attention as observers contemplate the significant implications for the practice of SEM, institutional outcomes, and the long-term economic and social well-being of the United States. Over the past several years, Kalsbeek (2005), Green (2004), and Whiteside (2003) have provided compelling content on these issues. Observers from outside the SEM profession have weighed in as well, often drawing conclusions that are critical of enrollment management practices. A recent report summarizes these negative perceptions, characterizing enrollment management as institutions “[using] their resources to compete with each other for high-end, high-scoring students instead of providing a chance for college-qualified students from low-income families who cannot attend college without adequate financial support” (Haycock 2006).

This paper will highlight a few of the more prominent enrollment challenges currently faced by colleges and universities, and will conclude with summative comments about the implications of those challenges for the practice of SEM.

Demographics

Figure 1 shows relatively minor fluctuations in the aggregate numbers of high school graduates over the next ten years. However, the aggregate numbers mask a number of stark realities. The demographics of the next ten years will split institutions regionally into broad groups of haves and have-nots in terms of the number of high school graduates who are eligible to continue on to college.

States in the South and West will see large increases in the number of high school graduates throughout the range of years represented, while New England, the Midwest, and...
states in the middle region of the country will see much more modest growth (see Figure 2). In fact, specific sub-regions will experience declines in these numbers, particularly in the latter years of this time period. These regional differences are even more striking from the perspective of the racial/ethnic composition of high school graduates. It has been well documented that the U.S. is becoming more diverse; this is also true for the college-going population, as illustrated in Figure 3.

This chart includes graduates of private high schools, whereas Figure 2 represented only graduates of public high schools.

These demographic shifts are daunting enough, given higher education’s modest gains in bachelor degree completion rates among underrepresented students. There have always been wide gaps in educational attainment among racial/ethnic groups, and they are getting wider. From 1980 to 2000, bachelor’s degree attainment increased for persons aged 25 to 64 in each of the major racial/ethnic groups. However, the increase was significantly greater for White and Asian-American students. In 2000, Whites ages 25 to 64 were twice as likely as African-Americans to have a bachelor’s degree, and almost three times as likely as Hispanics/Latinos (National Center for Public Policy and Higher Education 2005). Those statistics make the demographics alone a sobering prospect. But it doesn’t end there.

**Economics**

The shifting demographics become even more challenging as we consider the confounding economic forces at play in the current environment, namely rising costs, declining state support, and the increasing financial need of students seeking access to higher education. These factors have been reported repeatedly in the higher education literature and will not be reviewed at length here, except to highlight the close relationship between increased diversity among persons of college-going age and family income. Here again, the numbers vary significantly by region.

Figure 4 shows that in the West and South—the same regions that will experience the largest upcoming increases in high school graduates—the percentages of families at lower income levels are the highest. When looking at the data by race/ethnicity, we see African-American and Hispanic incomes lagging far behind other groups (see Figure 5).
Anyone who values diversity and equity will be concerned about these data. But for us as educators, they take on added meaning when considered with the relationship between family income and bachelor’s degree attainment. Data compiled by Mortensen (2005) indicate that persons from the top quartile of family income in the United States are nearly nine times more likely to earn a bachelor’s degree than persons from the lowest quartile. Among the latter group, only about 6 percent earn a bachelor’s degree by age 24.

**Institutional Priorities**
The demographic and economic trends just described constitute a difficult hand higher education leaders have been dealt as they seek to effectively manage their institutions in an extraordinarily challenging context. Critics of higher education, and of strategic enrollment managers in particular, often fail to grasp the complexity of that context. A superficial analysis of the situation invites some to conclude that SEM and its practitioners are the source of the problem (Haycock 2006). In fact, with its comprehensive approach to enrollment, SEM offers one of the few avenues for achieving the goals of access and equity for students, while maintaining viable financial outcomes for institutions.

If criticisms of higher education and SEM have at times been misguided, those of us within the academy must also account for having been complicit to a certain degree in perpetuating the challenges we face. We have at times been schizophrenic, if not downright duplicitous, by on the one hand pledging our allegiance to access and equity, while on the other hand touting college rankings, institutional profiles, and budget outcomes that in many ways run counter to those same aspirations. Moreover, we have typically done a poor job in educating our community members on why they should care as much about our institutions’ access programs as our freshmen’s average SAT score, or being clear about the ways SEM practices can be used to promote educational opportunity.

**The Brave New World of SEM**
With acknowledgement to Aldus Huxley, those of us in the SEM profession find ourselves in a “brave new world” in terms of the challenges we face and our approaches to plying our trade. To thrive in the current context will require that we exhibit a certain kind of bravery, leading our institutions in directions that run counter to prevailing wisdom or conventional enrollment practices. While the opportunities to engage in this type of leadership are many, enrollment managers will do well to begin with the areas described below.

**Achieving Clarity on Enrollment Goals and Institutional Priorities**
One of the most difficult challenges in developing an institutional SEM plan is establishing clear goals for the number or “mix” of students the institution wants. This is not necessarily surprising. Conversations on enrollment goals will inevitably lead to discussions of institutional mission and priorities. A focus on aggregate numbers will evolve into detailed analyses of the “mix” of students that best fulfills the institution’s mission. A single goal for overall enrollment becomes multiple goals for undergraduates, graduates, residents, nonresidents, first-year students, transfer students, students of color, retention and graduation rates, and any number of other student subgroups depending on an institution’s unique circumstances.

Among the many discussions that take place on campus, prominence needs to be given to prioritizing—for example, should we be providing access or should we be enrolling high-ability students? This is not an either/or proposition in which the decision is made to enroll all of one group of students and deny admission to another. Rather, it is critical that the institution understand the trade-offs where they exist, and be honest with itself in the enrollment decisions it is making. These are not easy conversations, which prompts many institutions to avoid having them.

When comprehensive enrollment goals do not exist, it is incumbent on enrollment managers to lead their institutions in establishing them. The beginning point is to create a table listing current enrollments of recommended categories of students, with targets for each category over the next five to ten years, and reviewing the numbers with campus decision-making groups. An active response is virtually guaranteed, providing the impetus for the kind of campus-wide conversations required to develop the ultimate list of enrollment goals.

**REDEFINING ACADEMIC ABILITY, POTENTIAL, AND SUCCESS**
Students and institutions have long been evaluated in terms of high school grade point averages and standardized test scores. Other criteria are often used in making admission decisions and scholarship selections. However, when touting the academic ability of students or the student profile of an institution, high school GPAs and standardized test scores are most often cited. This practice persists despite the widely-acknowledged limitations of these means of measuring students’ academic ability, potential, and success.

A number of studies have looked at the relative value of high school GPAs and test scores in predicting academic performance in college. Findings from these studies have been consistent, indicating that high school grades are slightly more effective as a predictor than test scores alone, but that the addition of test scores produces a modest improvement in predictive value (Zwick 2004). In one such study, high school GPA was found to account for 15 percent of students’ first-year college grade point average, with 13 percent of variability accounted for by combined math and verbal SAT score. The combination of GPA, SAT math, and SAT verbal scores increased the predictive value to 23 percent. The same study found significant differences between racial/ethnic groups in terms of the relationships among high school GPAs and SAT scores, and college GPAs. Predictive values were generally higher for Asian American and White students, and lower for Black, Hispanic, and Native American students (Zwick 2004, p. 114).
Looking specifically at standardized tests, Sedlacek (2004) notes that these instruments are poor predictors of first-year college GPA for "anyone who has not had a White, middle-class, Euro-centric, heterosexual, male experience in the United States" (p.6). Thus, the extent to which test scores continue to be used to evaluate students and as an indicator of institutional prestige is perplexing.

Sedlacek advocates the implementation of an assessment model based on noncognitive variables, that is, “variables relating to adjustment, motivation, and student perceptions, rather than relying solely on the traditional verbal and quantitative [measures]” (p.7). Educators have long sought to evaluate such variables by looking at high school coursework, extracurricular involvement, leadership activities, and essays. However, standards in each of these areas tend to be set locally by individual institutions, often leading to the same systematic bias such measures seek to avoid. Sedlacek’s approach, based on 30 years of testing and development, has been shown to mitigate the systematic bias associated with many admission and scholarship selection processes. Moreover, it provides information that can be used to promote students’ academic achievement throughout their college careers, and improve retention rates.

Here again, enrollment managers and other institutional leaders are called to exhibit courage in redefining student and institutional success. It is incumbent upon us to focus less on average GPAs and test scores among our incoming students and to spend more time talking about “value added” measures that indicate the extent to which we provide increased access to students we are mission-bound to serve. This is evidence that we helped a more diverse group of students to be academically successful and graduate.

REALIGNING INSTITUTIONAL FINANCIAL AID PROGRAMS

Many observers of higher education have decried the shift from need-based to merit aid over the past 30 years (Dynarski 2002; Green 2004). Given the data reviewed in this paper, that shift is indeed troubling. While this trend includes many types of externally-funded aid that are outside institutions’ control, current realities suggest that institutions would do well to reconsider their awarding practices for institutionally-funded merit aid.

In an approach also used by other institutions, Oregon State University in 1998 revised its selection process for institutionally-funded merit scholarships to include a need-based component. In the first stage of its process, Oregon State utilizes an expanded definition of academic merit, in which applicants can compensate for lower high school GPAs and standardized test scores by achieving stronger scores on noncognitive variables. Once the student has been selected for a scholarship based on merit, the amount of the award she or he is given is based on demonstrated financial need. Among students with similar merit rankings, a student from a low-income family might receive a $5,000 award, while a student from a high-income family might be awarded $1,000.

Making this type of change is not as easy as it may sound. Traditional assumptions about the relationship between high school GPAs, standardized test scores, and scholarship awards are potent. And we are, in fact, talking about money. Few issues are as likely to raise the ire of students or their parents as hitting them in their pocketbooks. There will certainly be incidences when students with extraordinarily high GPAs and test scores receive modest scholarship awards, or receive less money than other students with lower quantitative credentials. At that point, even persons who value educational access and equity may well be upset. In the end, institutions need to be clear on their values and resolve to weather the inevitable criticisms that will be leveled at them, which brings us full circle.

The initiatives highlighted in this paper are not to be considered in isolation, but rather constitute the type of comprehensive approach that is inherent to SEM. Implementing effective enrollment initiatives—including noncognitive variables in student evaluations, consideration of financial need in awarding merit scholarship, and many others, will ultimately depend on clarity of enrollment goals that are directly traceable to institutional mission and purpose. To do otherwise is an abrogation of our responsibilities as educators, and will shortchange the potential of our institutions as they seek to navigate the challenging waters that lie ahead.

References


ABOUT THE AUTHOR

Bob Bontrager is Director of the SEM Conference and Director of AACRAO Consulting Services. He previously served as Director of Partnership Programs at Oregon State University and as Chief Enrollment Officer at Oregon State and at Eastern Mennonite University.
The Influence of Peer Groups on Academic Success

The authors examine how peer relationships influence students’ academic success. After defining peer groups, the article considers the ways in which students’ peer networks facilitate or inhibit access to academic resources. The authors argue that the composition and purpose of a peer group influences academic achievement and students’ likelihood to pursue and persist in postsecondary education.

By Margaret W. Sallee and William G. Tierney

Human beings spend their lives tangled in a complex web of relationships. Young children look to their primary caretakers—often their parents—for support and validation. As children become adolescents, their reference group begins to change. Parents’ opinions often become less valued as teenagers increasingly look to their peers to provide a sense of acceptance and validation. Peer pressure becomes more salient in all aspects of teenagers’ lives, from social situations to performance in the classroom. Some students form relationships with peers that promote academic engagement. Others join peer groups that encourage disengagement from the school and academic practices. Members of these two types of groups will have different experiences in school leading to different academic futures. In this article, we examine how peer relationships influence students’ academic success. We argue that peer groups can form networks that offer students access to social capital—or resources that they can use to succeed academically. After defining peers and discussing social capital, we offer a typology of different peer groups. We assert that all peer groups belong to one of four categories, each with different structures and purposes. Regardless of the ultimate goal for members, the effectiveness of any peer group depends on the way in which it fulfills three functions. After discussing these functions in detail, we conclude by revisiting the ways in which peer networks can be used to help students prepare for and be admitted to college.

Definition of Peers

People are embedded in a variety of social networks. An individual is often simultaneously a member of a family, a neighborhood, a church, and an office team. However, not all social networks necessarily constitute a peer group. A peer group consists of those who are of roughly equal status. For teenagers, a peer group is composed of individuals who are approximately the same age. Like their adult counterparts, teenagers can be immersed in a variety of peer networks, looking to friends, classmates, and teammates for support in different social situations (McNeal 1995). Although others (Astin 1993; Gibson, Gándara, and Koyama 2004) offer many definitions of peers, we define a peer group as any set of same-age peers linked by a common interest or identity who engage in sustained interaction. “Sustained interaction” suggests that individuals interact with the same set of peers on a regular basis over a significant amount of time. To ensure this sustained interaction, individuals must be invested in their peer groups and feel a sense of accountability to other members. Peer groups can refer to a student’s set of close friends, a student’s classmates, or a student’s teammates. Students can be part of or influenced by multiple peer groups at the same time. As such, students might simultaneously feel pushed to achieve through a group of peers in a class, but receive cues from their close friends that academic achievement is not valued. Students’ success is also shaped by their position within peer groups and various social networks. For example, some students belong to peer groups that have access to fewer resources—both financial resources and knowledge resources—for the college-going process.

Social Capital: Capitalizing on Peer Networks

Although academic achievement and the quality of a school certainly play key roles in student success, proponents of social capital also argue that an individual’s acquaintances (or social connections) help determine the pathways available to them. Pierre Bourdieu (1986) and James Coleman (1990) offer similar, though occasionally conflicting, perspectives on social capital. Bourdieu and Coleman agree that social capital can be understood as a network of relationships designed to help members accomplish certain goals. Whereas Coleman focuses on the positive nature of social capital, viewing its accompanying norms and sanctions as a positive form of
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indicate that working-class students do not always profit (Stanton-Salazar and Dornbusch 1995). However, studies ably have inherited such knowledge from their parents ing relationships with their middle-class peers, who presum the college application process, they can benefit from form dents may not specifically have the social capital to understand college-going process. In addition, although working-class stu social networks. Students form connections with teachers tutitional agents to help students become embedded in multi influence in two ways. First, they can facilitate access to insti other words, peer groups can discourage members' academic growth (Stanton-Salazar and Spina 2003). Middle-class high school students can often rely on their parents' social networks to help facilitate connections and to aid them in the college-going process. In contrast, working-class peers draw upon more limited networks that are more homogenous, have access to fewer resources, and are restricted to a smaller geographic area. Students from working-class families are often the first in their families to go to college and cannot expect to profit from the larger social networks available to their middle-class peers.

Although they may be excluded from many cosmopolitan adult social networks, working-class students are capable of entering into beneficial social networks with their school peers. Ricardo Stanton-Salazar (2004) argues that peer networks have the potential to serve as either mediating or moderating influences. Peer networks can act as a moderating influence by inhibiting the pro-academic resources being generated through involvement in multiple networks. In other words, peer groups can discourage members' academic success. However, peer networks can serve as a mediating influence in two ways. First, they can facilitate access to institutional agents to help students become embedded in multiple social networks. Students form connections with teachers who, in turn, pass on important information about the college-going process. In addition, although working-class students may not specifically have the social capital to understand the college application process, they can benefit from forming relationships with their middle-class peers, who presumably have inherited such knowledge from their parents (Stanton-Salazar and Dornbusch 1995). However, studies indicate that working-class students do not always profit from partnerships with middle-class students (Hallinan and Williams 1990; Stanton-Salazar and Dornbusch 1995). Stanton-Salazar and Dornbusch found that students of lower socioeconomic status have a difficult time incorporating friends of higher socioeconomic status. By not forming close friendships with students from different social classes, working-class students are therefore less likely to profit from social capital networks unless such networks are intentionally created by the school.

**PEER NETWORKS PROMOTE AN IDEOLOGY OF ACADEMIC ACHIEVEMENT**

Peer networks can also serve as a mediating influence by promoting an ideology of academic achievement among students. By intentionally creating groups of students, schools and college preparation programs can foster an academic identity that encourages all students to attend college. Some schools and programs have started to do this by relying on the notion of fictive kin. Coming out of anthropology, fictive kinship refers to close relationships between those not related by blood but linked by a common economic or social goal (Ebaugh and Curry 2000; Fordham and Ogbu 1986; Tierney and Venegas 2006). In the case of high school students, a network of fictive kin can be composed of those who have plans to apply to college. Fictive kin networks are especially useful for those who come from families who have little knowledge of the college-going process. Students can enter into communities in which they not only have access to information and resources, but also are granted an identity that presumes that college is in their future.

**Typology of Peers**

Whereas teachers and administrators play a role in shaping the composition of peer groups in the classroom and extracurricular activities, other peer groups—most notably friendship groups—are organized and maintained by students themselves. In other words, teachers and administrators can influence student interactions in the classroom and in school-sponsored activities; outside the classroom, however, students are responsible for finding and maintaining their own friendship groups. Although students may rely on different peer groups for different sets of needs, not all peer groups are equally effective in helping students get into college.

The typology of peer groups can be delineated on two different sets of axes. Peer groups can be located either within the school or outside of the school and can be either formal or informal. Formal peer groups are those that have been organized by the school or by adults whereas informal peer groups are those that have been created and maintained by peers themselves. Examples of peer groups that fall on each of these axes are listed in Table 1, whereas Table 2 elaborates on formal peer groups located within the school. In Table 2, peer groups are delineated by goal (college preparation or interest development) and by the area in which they occur (in class or out of class). We define in-class activities as those in
which the majority of instruction and participation occurs within the classroom. Out-of-class programs may have an in-class instructional component, but they require additional outside student involvement. As with any typology, the following four sections describe ideals; the typology is not exhaustive, nor do student groups fit neatly into just one of the four categories. Students may claim membership in a variety of different social networks. Tables 1 and 2 provide just a sampling of possible groups. However, all of the peer groups that we describe fit the definition we provided earlier: all contain members of approximately the same age who spend a significant amount of time with one another and are invested in the goals of the group. We now further elaborate on the different kinds of peer groups in this typology.

### Formal, in-school Peer Groups

Although there are a variety of formal, in-school peer groups, their foci vary dramatically. As such, we have further divided these groups into the four quadrants. Classroom peer groups with a focus on college preparation might include students enrolled in honors courses, Advanced Placement courses, or Advancement Via Individual Determination (AVID) courses. Every classroom does not automatically constitute a peer group. Spending 50 minutes a day with other students learning about history, math, or science does not necessarily lead to any common bonds between students. In-class peer groups are formed only when students share a common academic identity and a concern for one another's well-being.

Sharing a common academic identity need not be conflated with being grouped with students of the same ability. Although Thomas Hebert and Sally Reis (1999) found that high-achieving students enrolled in honors courses with their peers accrued a variety of benefits, there is no indication that their academic ability was the sole cause of these benefits. Rather, students profited from a structured program with frequent peer interaction and support from caring adults. Hugh Mehan, Irene Villanueva, Lea Hubbard, and Angela Lintz (1996) found similar benefits for students enrolled in AVID, a college preparation program that prepares academically average students for college eligibility. Much like the high-achieving students in the previous study, AVID students benefited by sharing a common academic identity with their peers.

Although many students acquire an academic identity through classroom-created peer groups, others gain that identity through out-of-class, in-school peer groups in college preparation programs. Students in programs such as Puente and MESA (Mathematics Engineering Science Achievement) participate in programs in which they work with peers, often of similar racial or ethnic backgrounds, to prepare for college. For example, Patricia Gándara (2002) details the success of Puente programs in preparing Latino students of all ability levels for college. Puente creates an environment in which peers serve as a source of support for one another. Thus, the key to creating a community of college-going peers may have less to do with the similarity of student ability than with the structures in place that encourage students to develop bonds with their peers.

Some peer groups may focus on college preparation, whereas many students become involved in a variety of other activities that focus on promoting student growth in other areas, both inside and outside the classroom. In 2001, 39 percent of all high school seniors participated in athletics; 25 percent of seniors participated in the performing arts; 15 percent participated in academic clubs; and 10 percent participated in student government (National Center for Education Statistics 2005). Although students have the opportunity to become involved in a variety of activities, athletics is by far the most popular choice. Besides the enjoyment of the activity itself, participation in extracurricular activities, such as athletics, may bring other benefits. Jacquelynne Eccles and

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**Table 1: A Typology of Peer Groups**

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<th>In-school Groups</th>
<th>Out-of-school Groups</th>
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<td><strong>Formal</strong></td>
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<td>▶ Girl Scouts of the USA/Boy Scouts of America</td>
<td>▶ Mathematics Engineering Science Achievement</td>
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<td>▶ Religious youth groups</td>
<td>▶ Puente</td>
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<td>▶ Community sports</td>
<td>▶ “I Have a Dream”® Foundation</td>
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<td>▶ Early Academic Outreach Program</td>
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<td>▶ Boys and Girls clubs</td>
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<td>▶ Role-playing gamers</td>
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<td>▶ Skateboarders</td>
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<td>▶ Video gamers</td>
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<td>▶ Informal garage band</td>
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**Table 2: Formal, in-school Activities**

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<th>Goal</th>
<th>In-class Groups</th>
<th>Out-of-class Groups</th>
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<td><strong>College Preparation</strong></td>
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<td>▶ Mathematics Engineering Science Achievement</td>
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<td>▶ Honors</td>
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<td>▶ AVID (Advancement Via Individual Determination)</td>
<td>▶ “I Have a Dream”® Foundation</td>
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<td>▶ Early Academic Outreach Program</td>
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<td>▶ Band</td>
<td>▶ The Posse Foundation</td>
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The first guide of its kind to be published in 8 years, AACRAO’s *Transfer Credit Practices of Designated Educational Institutions* (2006) is the latest collection of results from the association’s 70-plus year program of voluntary information exchange on the subject. The 353-page publication details 50 major institutions’ practices for awarding transfer credit from other in-state colleges and universities. Representative of every state in the country, this guide offers a crucial reference that your institution can draw from in tailoring and fine-tuning its own transfer credit system.

Additionally, the book presents state-by-state and alphabetical listings of all institutions with their institutional and programmatic accreditations and transfer credit practice. Institutions from selected foreign countries are also included.

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Community Colleges and Student Information Systems Implementation

Drawing conclusions from a national survey of community and technical college registrars, *Community Colleges and Student Information Systems Implementation* explores differences in job duties and responsibilities, as well as role conflict and ambiguity implicit in various system implementation strategies. In this 102-page booklet, author Sandra Lepley of the University of Central Florida examines in-house, outsourced, and consortia strategies, and their relation to college demographic characteristics.

Statistical data derived from the 13-question survey is analyzed and presented in 30 easy-to-read tables, rendering a highly useful base of knowledge for any small college registrar considering the planning and installation of a new student information system.

**ITEM #0114 | $35 MEMBERS | $50 NONMEMBERS**

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Bonnie Barber (1999) found that students who participate in team sports in high school are more likely to attend college than their peers who do not participate. The literature indicates that students can benefit from being part of a well-structured peer group. However, to help students successfully navigate high school and go to college, schools should focus their efforts on creating peer groups in classrooms based on a college-going academic identity.

**FORMAL, OUT-OF-SCHOOL PEER GROUPS**

Although many students participate in school-affiliated extracurricular activities, still others are involved with structured groups outside of school, such as the Boy Scouts and Girl Scouts. In the United States, more than three million boys and nearly three million girls participate in the Boy Scouts and Girl Scouts, respectively (Boy Scouts of America 2005; Girl Scouts of the USA 2005). Each group is guided by a mission of preparing members to develop good character and assume leadership responsibilities. Many junior high and high school students are also actively involved with religious groups. According to the 1992 National Education Longitudinal Study, 45 percent of all high school seniors participate in religious youth groups more than once a month; of these, more than 20 percent participate in youth group activities at least once a week (NELS 1988/2000). Although none of these groups is academic in nature, each bestows upon participants a specific identity—be it Eagle Scout or Mormon—that they share with other group members.

**INFORMAL, IN-SCHOOL PEER GROUPS**

Although schools can facilitate the formation of structured and supportive peer groups, many adolescents will naturally seek to form such peer groups on their own. Some peer groups, like gangs, form outside the school and rarely provide any benefit to their members with regard to increasing the likelihood of college attendance. Other groups, such as friendship groups, may develop through interaction on school grounds. Students can be embedded in many different types of friendship groups. In a study of adolescent friendships at three schools, Kathryn Urberg and colleagues (1995) found that students can be classified in one of three ways: as belonging to specific cliques, as belonging to loose groups (or groups of peers that are loosely connected), or as not connected to peer groups at the school. Groups can be either single gender or mixed gender. The size of friendship groups can range from just two individuals to greater than ten. In a study of Latino students in Southern California, Ricardo Stanton-Salazar and Stephanie Urso Spina (2005) found that most students cited between five and six other students as sources of support and members of a peer network. However, not all of the individuals cited necessarily belonged to the same friendship group. Such a finding underscores the fact that students are often embedded in multiple friendship groups, drawing support and taking social cues from a variety of networks. As we discuss later in this article, the composition of friendship groups can have an impact on students’ educational aspirations. Those who form friendships with others who value educational achievement will typically also seek to excel.

**INFORMAL, OUT-OF-SCHOOL PEER GROUPS**

Many teenagers look to their friends for social and emotional support. Though some rely on friends within school, others are involved in a variety of peer groups outside of school. Examples of such peer groups include skateboarders, youth who play together in a band, and students in a study group. Such groups provide a place for students to come together and focus on an issue of interest without, necessarily, leading to any negative academic sanctions. One exception is students who seek support and affiliation by joining a gang. As James Vigil (2004) describes, gangs generally require their members to adopt an oppositional identity, or one that is outwardly resistant to school practices. In a comparison of African American male gang members and non-gang members, Carl Taylor and colleagues (2003) found that gang members were less likely to complete their homework assignments than were their peers. Many gang members cited socializing with friends as the primary reason for coming to school while non-gang members reported that they attended school to get a better job or to go to college. Although gang members may have an interest in or aptitude for school subjects, their gang affiliation calls upon them to feign disinterest around their classmates. Due to such peer pressure, gang members often do not graduate from high school and experience little academic success. Though some might imagine that members of gangs have little in common with those involved in academic peer groups, each type of peer group fulfills the same three functions, albeit in different ways.

**How Peer Groups Function**

The impact of peer groups on their members depends on the following three factors: the amount of time members spend together, the way in which the group provides an identity for its members, and the strength of the network. We discuss each function in greater detail.

**TIME MEMBERS SPEND TOGETHER**

The time students spend engaged in an activity benefits them at individual and group levels. At an individual level, students accrue benefits through spending extra time on a particular activity. For example, a student who practices with the school band five days a week is likely to be a better flute player than a student who does not practice often. Similarly, a ninth grader who begins learning about the steps necessary to prepare for college admission will be more prepared to apply to college than a student who first hears about admission requirements as a twelfth grader. In addition, individual gains can also turn into group gains. Groups form because members spend time together. Peers become friends because of repeated contact.
The importance of sustained interaction holds true for many types of peer groups. Research indicates that college preparation programs that provide sustained support for peers will ultimately be more beneficial to students than programs that schedule events on an intermittent or irregular basis (Hayward et al. 1997; Oesterreich 2001). The focus should be on not only regular interaction but also sustained interaction over a significant period of time. Students in Puente programs, for example, spend two years enrolled in an English course with an explicit focus on Mexican American literature and the Latino experience. By coming together as a group each day, students acquire the identity of being “Puente students.”

**Identity Definition for Members**

Belonging to a peer group gives a specific identity to group members. Some peer groups are defined by particular identity characteristics—for example, all members are girls or all members are African American. Others are defined by the activity in which students participate—perhaps all are football players or all play in the band. An observer visiting a cafeteria at lunchtime might see students clustered based on extracurricular activities, academic identity, or racial or ethnic identity. Students in college preparation courses might sit at one table while student athletes and their groupies occupy tables across the room. Still other tables might contain students in band or those in drama. As Penelope Eckert (1986) discusses, members of these groups distinguish themselves from other groups in a variety of ways, including specific dress and use of language. For example, student athletes often wear their jerseys to school on game days, marking themselves as members of a team. Students not affiliated with any particular activity mark themselves through their clothing: “Goth” students are so defined by their preference for black clothing; “hicks” often wear cowboy boots and hats; and “preppy” students are easily identified by their Abercrombie & Fitch, or similar, clothing.

In her study of two social groups at one high school campus—“Jocks” and “Burnouts”—Eckert found that the way members used language differed dramatically. Specifically, members of each group had different preferred greetings and used varying grammar to construct sentences. In her study of the language practices among self-identified nerd girls in one California high school, Mary Bucholtz (1999) similarly found that these students distinguished themselves from their peers by their preference for proper grammar as well as academically oriented discussions. Other language differences also mark different peer groups, particularly for those for whom English is not the first language. Some peer groups prefer speaking in their native languages, which, while providing a connection among members, sometimes alienates them from other members of the student body.

However, language differences are not the only reason students affiliate with those of a similar racial or ethnic background. Students often seek out peers who look like them, knowing that students from the same racial or ethnic background face many of the same barriers in their lives. Gándara and colleagues (2004) argue that peer groups are often primarily defined by ethnicity and only later by other attributes. In other words, the Goth, hick, and preppy peer groups discussed above are almost entirely composed of white students. Students of color tend to congregate in other groups. In her study of white and Mexican American girls in a central California high school, Julie Bettie (2003) found that students formed separate friendship groups, primarily based on racial background but also due to the way they were tracked academically. For example, the majority of students on the college preparation track at this school were white. The Mexican American students in these courses tended to associate with other Mexican Americans of differing abilities. In this environment, racial and ethnic identity was a more salient and unifying identity characteristic than academic experience. Racial segregation often translates into class segregation. Bettie further describes the fact that white students did not associate across class lines whereas Mexican American students were more likely to associate across class, confirming Gándara’s claim that racial identity may supersede other identity variables.

As a result of being marginalized in their schools, some peer groups promote the development of an oppositional identity, which encourages group members to resist schooling practices (Fordham and Ogbu 1986; Gándara, O’Hara, and Gutierrez 2004; Ogbu 1991; Vigil 2004). Early research hypothesized that students of color develop an oppositional identity in an effort to avoid “acting white” or adopting behaviors associated with white Americans, such as academic achievement. More recent research (Carter 2005) suggests that students of color do not develop oppositional identities out of resistance to schooling practices, but rather out of forced adoption of white identities and practices.

The most successful students are those who learn to tap into multiple social and academic networks while maintaining an intact racial or cultural identity (Carter 2005; Gibson 1997; Mehan et al. 1996). Well-structured academic programs can help students achieve while simultaneously providing a sense of belonging. The explicit purpose of such programs is to prepare students for college while the implicit purpose is to provide a sense of belonging and to teach students that an academic future is within their reach. As described earlier, Latino students participating in Puente spend two years in a course studying Mexican American literature. The program’s focus specifically capitalizes on students’ cultural heritage while preparing them for college admission. Although college preparation programs should focus on academic achievement, they should not ignore students’ identities, but capitalize on them whenever possible.

**Strength of the Peer Network**

Members of successful peer groups feel a sense of connection to one another. Part of this stems from the fact that they spend a large amount of time together. Part of it is also due...
to the fact that all are focused on achieving the same goals, whether that is enjoying time with friends or obtaining admission to college. However, groups are more likely to achieve their goals when they have a stronger, or more closely knit, network of peers. The earlier discussion of social capital makes this point readily apparent. Students who are members of a tight network of peers have access to more resources than those who are only loosely affiliated with other students. Students who are tightly connected will feel a sense of obligation to succeed and to help other members of the group succeed as well. Hebert and Reis (1999, p.442) discuss one network of students who credited their peers for keeping them from failing in school: “For these students, achievement could be thought of as walking up a crowded staircase. If some students started to underachieve and tried to turn and walk down the staircase, their peers pushed them back up.” Students help each other to stay connected to the group and stay focused on achieving group goals.

Developing Academically Oriented Peer Groups

Just as peers play a critical role in providing academic and emotional support within the school, they also play an important role in helping each other prepare for college. Returning to our earlier definition of peer groups that highlighted the importance of sustained interaction among group members who feel a sense of accountability to one another and work toward a common goal, we discuss next how peer networks can help students succeed academically. Some academic preparation occurs through the curriculum or involvement in extracurricular activities, whereas other preparation occurs through involvement in college preparation programs.

BECOMING A MEMBER OF A GROUP

As we have noted, adolescents form peer groups. That is, unless individuals are homeschooled, multiple opportunities exist for students to bond with one another. We suggest here that families, educational institutions, and communities be more focused in the kind of peer groups that get created, rather than simply let them occur organically. Simply stated, a student is most likely better served in a peer group focused on science, for example, than one that is dedicated to Britney Spears. As we discussed earlier, for example, gangs play a specific role. The challenge for those concerned about academic success is to create scaffolding that may not be that different from a gang with regard to peer group bonding, but obviously, the focus is entirely different. That students may create among themselves a peer group around music may be entirely appropriate; what concerns us, however, is when students do not have peer groups aimed at academic success.

Through repeated and sustained interaction, students begin to feel a sense of obligation to one another. Programs such as Puente and AVID achieve this through regularly scheduled class meetings. The “I Have a Dream”® Foundation encourages members to become invested in the program through regular involvement over the course of a student’s K–16 career. Systematic involvement around an academic issue has the potential of creating change. Sustained programmatic interventions lead to changes in participants’ behavior. Many students in such peer groups indicate that they socialize with other participants when the actual meeting has been completed. Gándara (2002) found that Puente students were more likely to socialize with school friends than out-of-school friends, compared with non-Puente students. She also found that 77 percent of Puente students said that they socialized with other Puente students. Socializing with school peers is important because non-school peers may be less committed to academics. However, socializing with other program participants allows students to support one another and reinforce the norms of the program. It helps students to become enmeshed in a network of peers all striving to accomplish the same goal—admission to college.

As our earlier discussion of social capital suggests, peer networks facilitate access to academic resources and promote academic achievement among members. Students learn how to become college-ready while relying on their peers for help in the process. Many working-class students are the first in their families to apply to college and, unlike their middle-class peers, cannot rely on their parents’ social capital and knowledge of what it takes to get into college. Accordingly, peer groups need to be developed that focus on equipping participants with the knowledge and the social connections necessary to excel in high school and be admitted to college.

ESTABLISHING AN ACADEMIC IDENTITY

For many teenagers, the epitome of “cool” is being a star player on a sports team or a cheerleader. Cool is not often equated with academic success. However, some schools and postsecondary institutions are able to create a new peer group for students and, in the process, help students establish an academic identity. In their study of Latino peer groups in college preparation programs, Kristan Venegas and William Tierney (2005) found that participants joined a program with the expectation that they would be interacting with other involved students. In fact, many sought out the program specifically to affiliate with those who were more interested in school and had plans for college, unlike many other students in the school. For students who come from schools with historically low rates of college attendance, the presence of such programs provides a needed haven and a sense of identity for academically oriented students.

However, students do not necessarily need to identify as college-bound before joining a peer group aimed at academic success. Several studies indicate that programs have successfully changed the structure of students’ peer groups, helping students to move from affiliating with nonacademically motivated students to those with higher academic aspirations. For example, Mehan et al. (1996) found that AVID students formed new academically oriented peer groups after sustained participation in the college preparation program. Such peer groups have been found to be most successful
when students are able to honor their racial and cultural identities (Gándara and Bial 2001; Mehan et al. 1996; Oakes 2001). As reviewed earlier, Puente capitalizes on students’ racial and cultural backgrounds through its program design. AVID encourages students to develop critically reflective skills without erasing cultural identity. These successful programs do not force peers to relinquish their identities in order to excel.

Most teenagers naturally seek out connections with their peers. Some of these connections are based on common interests whereas others are based on a desire to belong. We have suggested in this article that schools need to be more forceful and purposeful in the creation of peer groups aimed at academic success. By gathering college-bound students, peer groups create a structure in which students support one another and motivate one another to succeed. To be sure, many students remain close with their preexisting friends and continue their involvement with other student organizations at school. As we noted at the outset, students can hold membership in multiple groups at the same time. A teenager is simultaneously an athlete, a musician, an actor, and, it is hoped, a college-bound student. Schools can create environments that unite students based on a common academic identity and allow them to support one another to achieve the ultimate goal: admission to and graduation from the college of their choice.

References

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William G. Tierney is University Professor and Wilbur-Kieffer Professor of Higher Education and Director of the Center for Higher Education Policy Analysis at the University of Southern California.
Taking Control of Enrollment Management at Small Private Universities: Creating an Interactive Interface

Enrollment management is a process critical to most small private universities that rely on tuition for a significant portion of their operating budgets. Often these universities rely on outside consultants to help them in performing this important process. This case study describes how university assets were used to create an interactive interface for the enrollment management process that allowed the process to be brought in-house. This, in turn, led to dramatic improvements in both operational performance and the achievement of strategic admission objectives.

By Elliot Maltz

Most private colleges, unless they have developed a very large endowment, base their revenue primarily on tuition income. This means a systematic approach to enrollment management is critical to ensuring stability in fiscal planning. Schools approach the technical challenges associated with enrollment management in a variety of ways, often by relying on offices of institutional research to perform this function or by staffing the admissions office with statistical specialists (Bontrager 2004). However, many smaller schools lack internally the resources or the technical expertise to address these problems. In these cases, outside consultants are often hired to help determine which students to admit and how much financial aid to offer to recruit a desirable incoming class. In doing so, some of the control of the process is ceded to these same consultants.

The purpose of this article is to describe how a small private school can use internal resources to allow the admissions office to take full control of the enrollment management process. Specifically, we describe how Willamette University, in Salem, Oregon, combined resources from the undergraduate admissions office with a sister graduate school and the office of institutional research to develop an effective model to predict yield and discount rate. This model was embodied in an Excel-based interface that allowed the admissions managers to manage the enrollment process in real time, thereby improving control of the process. This allowed the school to maintain the integrity of its incoming class while reducing the discount rate by 10 percent.

The balance of the article is organized as a case study describing how this was accomplished. We begin by outlining the traditional enrollment management process and its associated challenges at Willamette University. We then discuss the development of the interface and the operational and learning outcomes of the implementation. We conclude with general insights for schools considering adopting such a system.

The Traditional Enrollment Management Process at Willamette University

The Willamette University College of Liberal Arts (CLA) is typical of small schools that have traditionally relied on outside consultants for technical guidance. The admissions office receives more than three thousand applications for admission each year. Admission is offered to approximately eighteen hundred applicants, to achieve a target entering class of approximately five hundred enrollees. In fact, the actual percentage of admitted students who will enroll is not known in advance, and hence a critical task is to estimate accurately this percentage. This percentage is referred to as the enrollment yield from the admit pool. If the yield is overestimated, fewer students than expected enroll and revenue to the university is reduced. If the yield is underestimated, too many students enroll and the class size may exceed the fixed capacity of the school, resulting in significant incremental costs for additional housing, faculty, and other resources. In the worst case, overenrollment could compromise the quality of instruction as classrooms become overcrowded and student-to-faculty ratios exceed levels conducive to optimal learning. Therefore, an accurate estimate of the enrollment yield is necessary for effective fiscal planning.

A second, related decision for the CLA admissions staff is the allocation of financial aid to admitted students. All universities offer financial aid to a large proportion of their incoming students, both as a means of meeting students’ financial needs and as a recruiting tool. Financial aid allocations provide a powerful lever for increasing yield, but these decisions can have major fiscal implications as well. If too much financial aid is allocated, it not only increases the class size but could also result in the revenue per student being lower than the cost of supporting that student while at the university. Thus, when the admissions office has identified a set of students to admit, the staff conducts an assessment of...
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financial need and merit to determine how much aid to offer each admitted student. Before sending the final admission letters and financial aid packages, the admissions office estimates the discount rate, defined as the percentage of the total tuition that is offered to the enrolled class in the form of financial aid.

THE TRADITIONAL PROCESS FOR ESTIMATING YIELD AND DISCOUNT RATE

The enrollment management process traditionally began by establishing targets for enrollment and the discount rate for the incoming class (see Figure 1). Discussions between the dean’s office, the admissions office, the president, and the vice president of finance attempted to balance the long-term strategic goals for the college (e.g., academic quality, geographic and ethnic diversity of the student body) with the fiscal implications of attempting to achieve those goals. These conversations began in the summer before the year when the admit decisions were made to establish enrollment and discount rate targets. For instance, targets were established in the summer of 2005 for admission decisions to be made in the spring of 2006 that resulted in an entering class in the fall of 2006.

When enrollment and discount rate targets were set, the information was sent to an outside consultant who returned a suggested financial aid allocation strategy for the agreed-upon goals. This strategy was embodied in a grid corresponding to seven levels of financial need and five levels of academic quality (Table 1, on page 19). The grid in Table 1 provides an example of a recommended financial aid figure for each level of financial need and academic quality. This grid was typically received from the consultant no later than the middle of October.

By February 1, all applications were received. The more than 3,000 applications were reviewed to make decisions on the obvious candidates for admittance or denial. Preliminary decisions are based primarily on academic credentials (e.g., grade point average, classes taken, test scores). At this stage, other factors, including student background, interests, and activities, played a lesser role. Approximately 20 percent of the applicants who had good but not outstanding credentials were then subject to a subsequent review. To complete this stage of the process, the admissions staff conferred to make final decisions as to which students would be admitted, which denied, and which entered onto a wait list.

When the final admit list was determined, the number of admitted applicants was computed for each square of the need–academic quality grid. The grid with the admitted students’ data and the total financial aid budget was then sent to the consultant who used their (proprietary) models to estimate the enrollment yield and effective discount rate for the admit pool. The results of the consultant’s analysis were returned to the admissions office, and if the estimates of yield and discount rate did not meet preselected targets, advice was provided on how the dollar values in the grid could be altered to improve the results. The CLA admissions office used this advice as guidance to determine the final financial aid allocations for each cell of the grid. Admitted applicants were then sent offers of admission, including financial aid awards. Admissions office personnel waited for students to either...
The Registrar’s Guide: Evolving Best Practices in Records and Registration

The profession’s first comprehensive guide to be published in 27 years, this 35-chapter book surveys the various responsibilities of the registrar’s office today. Editor Barbara Lauren, Ph.D., J.D. (AACRAO) brings the knowledge and insight of over 36 talented registrar-authors to light, and crafts a reference tool that you’ll want to keep close-at-hand.

Topics covered include: registration and academic scheduling, detecting credentials fraud, implementing student information systems, preparing for commencement, accreditation requirements, project management, and budgeting…among others. Additionally, the guide highlights how your approach may differ in small colleges, community colleges, graduate schools, and law, medical and theology schools. Overviews of FERPA and the Solomon Amendment are also included.

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Table 1: Example of Financial Need–Academic Quality Grid

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1 Values are in dollars.
2 Data in this table are shown for illustrative purposes only. Actual allocations vary from year to year and are proprietary.

accept or decline admission, which was indicated through personal contact or receipt of a deposit from the student.

As acceptances and declines arrived at the admissions office, they were evaluated based on historical trends to determine whether developing yields appeared to be on target. If deposits arrived at a rate lower than anticipated, the admissions staff turned to the wait-list to admit additional students to the CLA.

**Drawbacks of the Traditional Process**

Several shortcomings are apparent in the traditional CLA enrollment management process. First, because the consultant’s work is based on a proprietary model, the admissions staff gains limited explicit knowledge into what factors are influencing enrollment. Second, the consultant’s model is based on assumptions that are used to build models for a variety of clients. Thus, forecasts may not adequately account for idiosyncratic differences of the CLA. The model used is built based simply on the previous year’s results modified to incorporate, to some degree, shifts in strategic goals.

Finally and perhaps most significantly, because the analysis is performed by an outside agency, admissions personnel have limited decision-making ability because of the timing and scope of the information provided by the consultant. The admission process has become very fluid and unpredictable due to the sophistication of applicants who are likely to research and apply to multiple institutions over varying time periods (Galoti and Mark 1994; Hossler, Schmit, and Vesper 1999). This behavior leads to significant shifts in the make up of the application pool even within a specific year. As new applications are received, the admissions office must make intermediate decisions with respect to the admit pool, and changes in the admit pool requiring on-demand model updates. Although the consultant typically provides updates on request, the timeliness of these updates was dependent on the workload at the time of the request. Because the consultant has multiple clients with similar admission decision calendars, the CLA admissions office often did not get the information when it was needed to make timely decisions.

Thus, the combination of these factors—use of proprietary models leading to limited learning, application of general models with limited incorporation of idiosyncratic factors, and lack of timely updated models—led to imprecise estimates of both yield and discount rate for the CLA.

**Genesis of a Partnership**

Because of these limitations, institutions have begun to take the enrollment management process in-house. Some schools use the institutional research office to perform this function. Others have started staffing the admissions office with statistical experts (see Bontrager 2004). However, for small schools such as Willamette University, the cost of developing a fixed in-house capability was not deemed cost effective. Thus, the admissions office chose to work with the Atkinson Graduate School of Management, a sister school at Willamette University, to use graduate students to develop tools that could be used in the place of additional staff. Specifically, a faculty member was contracted to oversee a student project to build (1) effective models for projecting annual yield and discount rate and (2) an interface that could be used by admissions office personnel that did not require sophisticated statistical expertise.

This approach offered a number of advantages to the admissions office. First, because the statistical modeling is kept on campus, the admissions office has full control over how often the modeling is performed. In addition, it can spend a significant amount of time acquainting the student team with the particular admission process used at the school. Thus, the modeling process becomes customized for the CLA. Moreover, because the students do not come to the modeling process with any preconceived notion of the key variables to be included in the model or the modeling technique that is most appropriate for this issue, new insights are often provided to the admissions office that would not have emerged with the traditional models used by consultants. The combination of the intense interaction between the student team and the admissions office and the novel statistical approaches provided by the students maximizes knowledge acquisition for the admissions office. In addition, by introducing an interactive interface that can be directly manipulated by admissions office personnel, the managers are better able to respond to changes in the admit pool in real time.

From the standpoint of the students, applying advanced statistical techniques to real problems with real data while still in school is an enormous opportunity. The experience provides invaluable insights into the advantages and disadvantages of various techniques. Further, the experience in working with professionals to understand the “messiness” of real-world statistical problems as opposed to canned examples provided in textbooks is a real eye-opener. Finally, from a career perspective, the opportunity to build their resumes for discussions with potential employers is a concrete benefit. The combination of these factors led to very enthusiastic, inventive students working for the CLA.
Model and Interface Development

Development began in 2002 as part of a data mining course being developed at the university. It was agreed that the developers would, over a three-year period, develop 1) a model using data mining techniques to predict yield and discount rate and 2) a user-friendly interface that could be used in an effective and timely manner to support management of admission and aid decisions.

Model Development: Phase 1

Following existing data mining protocols, model development began with interviews with enrollment managers to gain a better understanding of the institutional setting. This also provided opportunities for institutional knowledge creation as admissions personnel became more comfortable with the data used to drive these models. The initial data set used for model building consisted of four years of historical enrollment data and more than 60 variables, 40 of which were suggested by enrollment managers. The remaining variables were those that had been available but were not initially considered important by these same managers. It was agreed that the ultimate model would have to be in a form that could be reasonably well understood by enrollment managers and could provide insights into the effect of individual factors (e.g., amount of financial aid award) on the probability of enrollment, which would be useful for enrollment managers.

With this in mind, model building commenced. The initial model accurately predicted enrolling and declining for a little more than 70 percent of the applicants. The model was further evaluated over the summer of 2003 based on actual enrollee data from 2003, and again the model performed well, accurately predicting 70 percent of the time at the individual level whether an admitted applicant would attend or not.

Consultations between managers and analysts revealed one concern. Although the overall predictive accuracy of the model was acceptable, the model did a much better job of predicting whether an individual would not enroll rather than whether he or she would enroll. Of the students who enrolled, the model correctly predicted enrollment 25 percent of the time, whereas of the students who declined, the model correctly predicted the student would not come to Willamette University 88 percent of the time. (See Table 2.)

However, for the CLA it is more important to predict which applicants will enroll than those who won’t. It was agreed that future models would place a greater emphasis on predicting those who will attend Willamette. Nevertheless, the initial model was considered useful enough to develop a pilot test. That is, it was agreed that the model developed in-house would be used in conjunction with the model provided by the consultant to compare results.

Interface Development: Phase 1

In the summer of 2003 a user-friendly interface was developed allowing admissions personnel to make use of the predictive model with minimal understanding of its underlying mathematical properties. Managers could manipulate financial aid dollars in the aforementioned matrix and the underlying model would project total yield and discount rate for admitted students. Managers were also able to assess the likelihood that any individual admitted applicant would attend.

In 2004, the CLA admissions office began using the model and interface to guide enrollment management. Because of the instant access to model results, the admissions office was

| Table 2: Enrollee Classification Matrix, 2003 (Total Prediction Accuracy 70%) |
|-------------------------------------------------|-----------------|
| 2003 Actual (Student Action) | Model Predicted... |
| | Correctly | Incorrectly |
| Enrolls | Enrollment | Decline |
| 25% | 75% |
| Declines | Decline | Decline |
| 88% | 12% |

<table>
<thead>
<tr>
<th>Table 3: Individual Prediction</th>
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<tbody>
<tr>
<td>Inputs</td>
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<tr>
<td>Baseline</td>
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<tr>
<td>Merit</td>
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<td>Academic Rank (1-5)</td>
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<tr>
<td>Student from Oregon?</td>
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<tr>
<td>Private High School?</td>
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<tr>
<td>Predicted Likelihood</td>
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<tr>
<td>Cut Point</td>
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<td>Predicted to Attend?</td>
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</tbody>
</table>

*1 The actual variable names would be transparent in the real interface. They are not displayed in the example for proprietary reasons.

*2 Data in this table are shown for illustrative purposes only. Actual Merit, Predicted Likelihood to attend and Cut Point figures are proprietary.
able to generate timely initial estimates of yield and discount rate based on the inputs to the matrix. This, combined with the ability to predict enrollment on an individual basis, provided the opportunity to better manage the discount rate by allowing the admissions office to fine tune its financial aid allocations to the individual level and optimize yield while maintaining the desired academic and diversity profile (see Table 3, on page 20). Thus, as will be discussed in the next section, operational results improved substantially.

**Phase 1: Insights**

The development process enhanced institutional knowledge. The inclusion of certain variables in the yield model suggested others that should be considered for inclusion for subsequent analysis. In addition, improved understanding of data suggested that a more comprehensive predictive model incorporating interactions between variables might be useful in increasing accuracy. In terms of the interface, although predicting at an individual level was thought to be useful for managing enrollment yield and discount rates, it was found to be prohibitively time consuming. To address this, managers suggested that the interface be modified to provide a vehicle to break out projected enrollments by geographic region to support strategic CLA initiatives. Finally, the manager of institutional research suggested that the interface be provided in a format that would allow for easy modification to the underlying model to support additional analyses.

**Phase 2: System Refinement**

The second year of model development began with introducing a number of new variables into the database and reformatting others to make the model more efficient, and the total time devoted to understanding and setting up the data for modeling was reduced from eight to four months. The modeling phase in year two included the investigation of interactions between predictors suggested by the year one model development process. The new, 2004 model maintained approximately the same level of overall predictive accuracy (70%) but did a better job of predicting students who will attend. Specifically, the new model correctly predicted those who enrolled 65.7 percent of the time. It correctly predicted those who did not enroll 72.7 percent of the time (see Table 4).

The interface was altered substantially from the first year to enhance functionality and ease of use. Specific changes included the following items.

- The interface was redeployed in Microsoft Excel. This approach permitted the institutional research manager to easily develop auxiliary tools (such as what-if analyses) to better inform the enrollment management process.
- The revised interface incorporated a new screen where managers could modify the financial aid allocations for each cell in the grid to assess the effect on yield within particular cells and overall. For example, in Figure 2, the amount of financial aid given a student deemed a “3” on the academic quality scale and a “4” on the financial need scale is $3,000, which leads to a 25 percent yield. In Figure 3, increasing the amount of financial aid in this cell to $5,000 increases the projected enrollment yield to 32.7 percent.²
- The revised interface includes a screen that breaks out the expected yield by in-state and out-of-state admits.

² Numbers in Figures 2 and 3 are for illustration only. Actual dollar amounts, admit pool discount rate, and yield percentages are proprietary.

### Table 4: Enrollee Classification Matrix, 2004 (Total Prediction Accuracy 70%)

<table>
<thead>
<tr>
<th>2004 Actual (Student Action)</th>
<th>Model Predicted…</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Correctly</td>
<td>Incorrectly</td>
</tr>
<tr>
<td>Enrolls</td>
<td>Enrollment 65.7%</td>
<td>Decline 34.3%</td>
</tr>
<tr>
<td>Declines</td>
<td>Decline 72.7%</td>
<td>Decline 27.3%</td>
</tr>
</tbody>
</table>

Figures 2 and 3 are for illustration only. Actual dollar amounts, admit pool discount rate, and yield percentages are proprietary.
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(out-of-state results are not shown in Figure 2 and Figure 3 due to space constraints). This feature was introduced to support the CLA’s strategic goal of geographic diversity.

In addition to providing cell-based results, the revised interface also provides aggregate-level predictions of total financial aid outlays and the discount rate all on one screen to offer a quick snapshot of projected results.

The interface continued to include a screen that allowed managers to assess individual applicant-level probabilities of enrollment. Users simply enter data for the required variables and the interface displays the enrollment probability for an individual applicant. If desired, the manager can then change financial aid awards to increase the probability that an applicant will enroll (see Table 3, on page 20).

Operational Results and Knowledge Enhancement

The implementation of the model and interface resulted in superior operational performance (discussed below in the subsection on Operational results). Perhaps more importantly, the modeling and system development activity provided a number of learning opportunities for the CLA admissions office and, in fact, resulted in a revised process for admission, as noted in Figure 4.

A Revised Enrollment Management Process: It’s All About the Interface

By participating in model development, the CLA admissions staff developed new insights about their process that would never have emerged under the traditional approaches employed by consultants. For example, the admissions staff were now able to create their own initial financial aid allocation grid making explicit their tacit knowledge from previous experience and their understanding of process goals. As such, estimates of enrollment yield and discount rate are becoming more precise.

A key component of the revised process is the use of the interface to make decisions traditionally driven by advice from the consultant. The interface reduces the time spent by staff on the grid evaluation and increases the time available to look at individual cases. Under the old process, because of time constraints almost all evaluation of financial aid allocations was conducted at the grid level and individual applicant-level modifications were limited. With the new process, up to 50 percent of the individuals admitted receive applicant-specific modifications to their financial aid package. Neither the number of iterations made on the financial aid grid nor the amount of attention given to individual financial aid packages would have been possible without the in-depth knowledge afforded by the interface.

The interface also offered opportunities for real-time management later in the enrollment process. When admit letters are sent to applicants, these potential attendees have approximately one month to accept or decline. The CLA can use the system to rank students based on the model’s estimate of their probability of enrolling. When enrollment/declines begin coming in, the managers can use the system’s interface to track how well the model is predicting enrollment decisions. If a trend is detected in which enrollment acceptance rates are coming in below projections, the CLA can move quickly to start making offers to students on the wait-list. In addition, because they can see the trends in acceptance
regarding financial aid, the CLA can also get a sense of how much additional financial aid might influence admitted students who have not yet responded. In this way, the model and system’s interface allow real-time management response as more data and information are collected.

**Operational Results**

The operational results attributable to this revised process (see Table 5) were quite impressive, especially compared with the results obtained in the preceding two years using the consultant. The first row of Table 2 illustrates the percentage variance between the targeted enrollment and the actual enrollment. In previous years the actual enrollment was 17–21 percent more than or less than desired enrollment. In 2004 and 2005, using the system developed, the variance was less than 5 percent. In terms of variance from the target discount rate, when using the consultant the discount rate was between 2 and 3.5 percent off the target. With the in-house system the variance was less than 1 percent. It is also worth noting that a 1-percent reduction in the discount rate can result in hundreds of thousands of dollars in additional revenue to the University. Between 2002 and 2005, the CLA reduced its discount rate by more than 10 percent.

These results were achieved without any loss of academic quality (as indicated by SAT scores in Table 5) over the same period. There was a drop in ethnic diversity in 2004, and ethnic diversity was identified as a point of emphasis in developing the enrollment forecast for the subsequent year. In 2005, ethnic diversity rebounded. The 2005 class also made big strides in achieving greater geographic diversity, one of the CLA’s strategic objectives, with 4.6 percent more students enrolling from outside Oregon and 3.8 percent more students enrolling from outside the Northwest compared with 2004 data.

In summary, the in-house modeling process resulted in additional knowledge generation. The result was a new interface to assist enrollment managers in their financial analysis, which allowed for real-time responsiveness to shifts in circumstances. This, in turn, led to an improved enrollment management process and superior operational performance.

**Insights for Enrollment Management at Small Private Universities**

The outcomes highlighted in the previous section provide guidance for admissions offices trying to improve enrollment management. The first insight is that by bringing the process in-house, you not only gain more control but you also learn things about what is driving prospective students to attend your school. You can learn these things, however, only if you develop an interface that allows managers to interact easily with the model and respond to changes in the admit pool in real time. Having said this, small schools may not have the capability to develop such an interface.

Schools considering the approach described above must ask themselves several questions. First, does the institution have a program with the level of expertise necessary to develop accurate yield and discount rate models? Typically, a graduate program in statistics or management will have the faculty and student resources necessary to develop the necessary tools.

Second, because the students do not have experience in dealing with admissions office issues, a school cannot expect the initial models to be actionable. That is, the models must be tested before being used for yield management. The question to ask is, how soon do I need these estimates? In addition, because of the inexperience of the students, the initial part of the program requires significant time and effort on the part of admissions office personnel. Does the admissions office have senior staff with the time and interest to engage in these interactions? On the other hand, when the program is on its feet, the financial resources expended are likely to be much less than those required in a joint program using an outside consultant because the student labor costs will be much lower.

The final question to ask is, do we have the resources available to develop an interface that will actually be used by enrollment personnel? Do we have students and faculty capable of developing such resources? Places to look would be computer science departments or graduate schools of management. If the interface is developed, how do you ensure that the managers are willing and able to leverage it to make decisions? Because this component is so crucial to the success of the program, if the resources are not available the university may wish to consider looking outside to other universities or to the private sector for initial development and training.

If the assessment above suggests internal resources are not available, a university may still have to rely on an outside consultant. In this case they must be sure that any process incorporating an outside consultant emphasizes timeliness of inputs, interactivity, and increased institutional knowledge and control of the enrollment management process. In today’s complex, constantly changing environment, any process that does not incorporate these attributes is doomed to failure.

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3 Actual targets for enrollment and discount rate are proprietary.
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Race and Diversity in Higher Education: An Examination of Race-based Admission and Its Alternatives

This work reviews race-based admission and its alternatives, as well as the benefits of diversity on college campuses. This entails an overview of the research regarding the effectiveness of class-based approaches to achieving diversity and evidence of the importance of establishing a critical mass of persons of color at predominately white institutions. The essay concludes with a discussion of the sociopolitical impacts these strategies currently hold in efforts to achieve diversity on campuses, their effects upon attainment for and life outcomes of the targeted populations, and the future of race-based approaches to higher education.

Historic political and economic subordination of oppressed groups serve as the contemporary legal basis for persistent efforts of denying postsecondary education to persons of color (Anderson 2002). The cries of “reverse discrimination of whites” by opponents of race-based policies within postsecondary education must be countered with the consideration of history and current contexts as they relate to contested groups. An example of such consideration lies in the experience of African Americans. From 1636 to 1866, the first 230 years of American higher education, American institutions graduated a maximum of 28 African American students (Anderson 2002). Currently, the student population within Ivy League institutions is less than seven percent African American, far less than their representation within society as a whole.

Despite expanded college access and choice of underrepresented groups (African Americans, Native Americans, and Latinos), these populations are concentrated within lower-tiered universities and colleges, and, as mentioned, underrepresented at the nation’s most selective institutions. Completion of a degree from a selective institution possesses a credentialing effect, thus rendering both symbolic (the prestige of going to a good college) and substantive benefits (the challenging curriculum, resources, and cultural capital such as networks and ways of knowing). Such benefits hold particular significance for minority groups who continue to face economic and social disparities in comparison with their white counterparts.

Inequity between blacks and whites is revealed in the discrepancies between educational rewards for these groups. Oliver and Shapiro (1995) note that blacks earn merely 35 percent of that of whites over a lifetime. This finding is supported by Dalton Conley’s work (1999) that suggests that blacks often are underemployed, working fewer hours than their white peers despite wealth and class. These wealth differentials between blacks and whites holding similar credentials and achievements result in a continued social gap between the two groups.

The continued push toward expansion of postsecondary access to underrepresented minorities holds significance for minority academic and occupational outcomes not only at the undergraduate, but also at the graduate level. Attaining a degree from a selective college or university increases the likelihood of one’s admittance to highly ranked graduate and professional programs (Bowen and Bok 1998). This in turn positively influences one’s life chances and social mobility.

This work reviews the varied race-sensitive approaches to higher education challenged in the Grutter v. Bollinger Supreme Court case. This includes an overview of the research regarding the effectiveness of class-based approaches to achieving diversity and the importance of critical mass. The piece concludes with a discussion of the sociopolitical impacts these strategies currently hold in efforts to achieve diversity on campuses, their effects upon the attainment for and life outcomes of the target populations, and the future of race-based approaches to higher education. This is not an opinion piece, but rather a comprehensive review of race-neutral admission strategies and their comparison with race-based alternatives.

Grutter v. Bollinger

On June 23, 2003, the Supreme Court upheld the use of affirmative action in the college admission process in Grutter v. Bollinger, a case in which a white woman filed suit due to her rejection from the University of Michigan at Ann Arbor’s School of Law. The 5-4 decision of the Court held that the University possessed a compelling interest in promoting educational diversity. Subsequently, the Court supported its efforts to acquire a critical mass of underrepresented students to do so (Alger 2004). The judges ruled that

Dannielle Joy Davis
Diversity is a compelling interest in higher education.... [It] has educational benefits for the entire student body, and serves...educational mission(s).... Race is one of many factors that deference is owed to good-faith educational judgments of institutions. Race can be one of many “plus” factors [not predominant], but cannot be given mechanical or automatic weight.... An individualized, holistic review [is needed to] consider all pertinent elements of diversity.... No quotas or separate tracks, but pursuit of a “critical mass” is [acceptable]. (Alger 2004, quoting the Supreme Court ruling).

In her expert report for the Gratz v. Bollinger case, Patricia Y. Gurin (Brief no. 02-241) held that an institution’s structural diversity, or the student body’s racial and ethnic demographics, prompts diversity in the classroom, the curriculum, and informal arenas. These experiences yield rich personal and social outcomes:

- Students educated in diverse settings are more motivated and better able to participate in an increasingly heterogeneous and complex democracy[,]...showed the most engagement during college in various forms of citizenship[,]...were comfortable and prepared to live and work in diverse societ[y] and believed that [their] undergraduate education helped[ed] prepare them for their current job.

- It was also found that a diverse learning environment also rendered students who held an awareness of how diversity benefits the larger society (Brief no. 02-241). Students who interacted in diverse groups held an interest in learning about not only their own cultures, but also the cultures of others. They did not assume conflict to be negative, nor did they view diversity as a dividing force for the nation. These findings of high levels of social engagement mirrored students’ increased likelihood of democratic participation and preparation for entering the workplace. Gurin’s research also points toward the cognitive benefits of diversity such as increases in critical thinking skills, intellectual engagement, and superior academic skills. These findings suggest the broad range of benefits of structural diversity at both micro and macro levels.

- Diversity, or lack thereof, contributes to the racial reputations and campus climates of predominantly white colleges and universities. This reputation derives from individual and collective memories of both “in” and “out” group members of a society experiences with an institution, which like space or territory, can be racially and socially colonized by the dominant group (Feagin, Vera, and Imani 2002). In American society, these memories and ideas are subject to control by “White officials, historians...[who] sanitize...the interracial history of the United States” (Feagin, Vera, and Imani 2002, p.159). The hostility and racial discrimination faced by individuals gradually hold cumulative effects upon families and communities. An example of this is the reluctance of some southern universities to remove statues of Confederate leaders, and subsequent failure to recruit and retain African American and Latino students. The collective memory of African Americans’ painful past of enslavement and segregation counters white ambivalence toward these issues, resulting in a weakened campus climate for minorities at these institutions (Feagin, Vera, and Imani 2002). This is compounded by the resentment of some white and Asian students toward affirmative action or programs geared toward expanded access of underrepresented individuals and the improvement of race relations (Altbach, Lomotey, and Rivers 2002; Bowman and Smith 2002). An examination of race-based policy and alternatives offered by opponents of affirmative action follow, including the sociopolitical impacts of such initiatives.

**Race-sensitive versus Race-neutral Approaches in Higher Education**

Race-based policy in its application to higher education admissions refers to the use of race as one among many indicators in the selection of a qualified applicant. In their work Race Sensitive Admissions: Back to Basics, Bowen and Rudenstine (2003) hold that:

- Race sensitive admissions programs are intended to...enrich the learning environment by giving all students the opportunity to share perspectives and exchange points of view with classmates from varied backgrounds. [Race sensitive admissions programs also]...serve the needs of the professions, of business, of government, and of society more generally by educating larger numbers of well-prepared minority students who can assume positions of leadership...thereby reducing...the continuing disparity in access to power and responsibility that is related to race in America.

Despite the use of nonracial selection factors such as legacy, parental contributions to institutional development via donations, and athletic ability, the emphasis on race in admissions is contested by proponents of “a color-blind society” and those fighting against the “reverse discrimination” of whites. The following sections will present and critique race-neutral proposals in the postsecondary admissions process as presented in the arguments of the Grutter v. Bollinger case.

**RACE-NEUTRAL ADMISSION POLICY**

Race-neutral policy refers to employment of alternative means of establishing diversity in lieu of race/ethnicity, such as economic disadvantage, class, test scores, and class rank. Some hold that race neutral policy may result in semisegregated higher education. Stephen Raudenbush’s expert witness testimony in Grutter v. Bollinger revealed that race-neutral admissions would work to decrease the underrepresented minority student population in the Law School’s student body, while increasing segregated learning and social environments (Brief no. 02-241). Proponents of affirmative action argue that race neutrality is less effective than race-conscious policy in that it lessens the likelihood of creating diverse educational settings, resulting in deleterious effects on enrollment rates of underrepresented minorities (Horn 2001).
This work is supported by examination of the enrollment patterns of law schools that shifted from race-based to race-neutral admission policies. For instance, at the University of Texas under race-based policy, African Americans made up 6.2 percent of the incoming class from 1995 to 1996. From 1997 to 2001, after adoption of race-neutral policy, this number dwindled to 2.2 percent, only one-tenth of a percentage point higher than the African American student body in the institution’s first integrated class, in 1951, after segregation. Similarly, African American enrollment dropped from 8.7 percent to 2.7 percent at the University of California at Berkeley, and from 8.4 percent to 2.3 percent at the University at California at Los Angeles (UCLA) during the same period (Brief no. 02-241). Such declines risk mirroring tokenism when one focuses on the numbers as opposed to percentages. For instance, at Berkeley “only 1 out of 268 first year students entering in 1997 was African American; at UCLA 3 out of 289 first year students in 1998 were African American; at the University of Washington, 2 out of 138 students in 1999 were African American, and merely 1 out of 163 students in 2000 was African American” (Brief no. 02-241, p.29).

Latinos also experienced declines in law school enrollment due to race-neutral policy. At the University of Texas, the group made up 11.1 percent of the first-year class from 1993 to 1996, a percentage that fell to 8.3 percent from 1997 to 2001. During the same periods, Berkeley enrollments shifted from 13.2 percent to 6.4 percent, while enrollments dropped from 14.4 percent to 8.2 percent at UCLA. Latino enrollments also fell at the University of Washington, where the group’s student population fell from 6.3 percent on average during 1996–1998 to 4.6 percent from 1999 to 2001.

Socioeconomic Status Versus Race

A popular race-neutral policy advocated by opponents of affirmative action suggests the use of socioeconomic status (SES) rather than race in achieving a diverse campus. Students from low socioeconomic backgrounds constitute a small proportion of the communities of selective colleges and universities (Walpole 2003). Lower-income students who enroll in college do so at lower-tiered institutions and often are the first within their immediate families to pursue higher education. Findings point toward differences in academic achievement and the progress of this group compared with students having degreed parents. Analysis of the National Education Longitudinal Study of eighth graders in 1988 (which tracked students from eighth grade through two years after high school) reveals that first-generation students were less likely to complete the required “pipeline” steps for enrollment within a postsecondary institution. These required steps were defined as “aspiring for a bachelor’s degree, being prepared academically, taking entrance exams, applying to a four year college, and enrolling at a four year institution” (The Education Resources Institute 1997). Whereas these steps were completed by more than half of the students with degreed parents, only fourteen percent of their first-generation counterparts completed this process (The Education Resources Institute 1997).

First-generation students were also more likely to delay enrollment, a decision proven to hinder attaining a bachelor’s degree. Of this group, 29 percent enrolled in college immediately after high school compared with 73 percent of their classmates (The Education Resources Institute 1997). First-generation students who enroll are also more likely to do so on a noncontinuous basis. Consequently, these newcomers to the college community are less likely to persist through graduation.

Research suggests that the experiences and social outcomes of low-SES and first-generation students (outcomes related to occupational status and income level) differ from those of their more privileged peers. Low-SES and first-generation students are more likely to have dependent children, take longer to complete individual degree programs, receive less encouragement from family members to attend college, spend more hours working than studying, report less campus involvement, and were more likely to perceive faculty as unconcerned with student development and teaching (Terenzini et al. 1994; Walpole 2003). Their ability to convert their college experiences into social and economic capital is lower than that of their more advantaged peers (Walpole 2003). Nine years after college enrollment, the low-SES students earn lower incomes, possess lower levels of educational attainment, and have lower educational aspirations than their high-SES peers (Smith et al., 2002). This discrepancy in outcomes between low- and high-SES students might be explained by the degree of social networks held. For less-advantaged students, social networks further the understanding of norms that are different from those to which they are accustomed. Although the challenges of this group clearly are worthy of attention by policymakers, their issues represent but one segment of the complex dimensions of the nation’s underrepresented student population.

The use of class would serve as an ineffective substitute for race in achieving diversity and expanding access at the post-secondary level. Review of 1992 secondary school data suggests that although African Americans and Latinos “were more likely than whites to have lower incomes, their absolute numbers still represented a minority of the low-income population” (Kane 1998a, p.24). Under a class-based system, low-income whites and Asians would likely be the primary beneficiaries (Orfield and Miller 1998). Similarly, William G. Bowen and Neil Rudenstine (2003) note that for academically selective colleges and universities, few applicants are both academically qualified and poor. Hence, class-based policy fails to acknowledge the connections between race, class, and the proportion of minority poor within society, thereby stifling efforts to increase disadvantaged African American and Latino student populations in American post-secondary institutions (Bowen and Rudenstine 2003).

In his chapter “Misconceptions in the Debate over Affirmative Action in College Admissions,” Thomas J. Kane (1998b) holds that should selective colleges and universities
seek to secure substantial enrollment of minorities without consideration of race, they would have to reserve six times as many admission slots for the economically disadvantaged as they now reserve for minorities. The use of SES rather than race might be more effective in areas of the country where African Americans and Latinos make up a greater percentage of the population, thereby increasing the likelihood of an increased number of eligible disadvantaged minorities (Orfield and Miller 1998).

The use of quantitative measurement has not gone without notice by proponents of race-neutral policy. The percent plan refers to postsecondary admission policy that grants admission to a percentage of high-ranking high school graduates from each secondary institution within a given state (Orfield and Miller 1998). Despite its dependence on de facto segregation at the secondary level (Bowen and Rudenstine 2003), this approach has been upheld as an alternative to race-based admission policies for achieving diversity within higher education. Opponents criticize the plan by saying it "can be implemented only at the undergraduate level at large state universities and cannot be applied to private institutions, to small institutions…national institutions, or to graduate and professional school programs" (Bowen and Rudenstine 2003, p.30) due to their massive national and international applicant pools. In regard to professional school admission, Bowen and Rudenstine suggest that should the top ten percent of students in the academically selective colleges and universities be granted admission to professional schools, merely three percent of these students would be from underrepresented groups; should the top five percent of students be granted admission to professional schools, one-half of one percent would come from minority backgrounds. One must also consider that only a fraction of the eligible applicant pool would have an interest in pursuing such programs (Bowen and Rudenstine 2003). The authors assert that “without some explicit consideration of race, professional schools that ordinarily admit a significant number of students from selective colleges would simply not be able to enroll a diverse student body” (Bowen and Rudenstine 2003, p.15).

In his chapter, “No Alternative: The Effects of Color-blind Admissions in California,” Jerome Karabel (1998) also questions the ability of color-blind admissions to bring about a diverse student body. He holds that although outreach efforts might increase the number of qualified African American and Latino applicants, it is less likely that such programs will render these groups as competitive as their white and Asian peers for admission to prestigious universities such as UCLA or Berkeley. The effectiveness of outreach efforts is similarly challenged by Robert A. Kronley and Claire V. Handley (1998) in their study of postsecondary desegregation in Mississippi after adoption of universal admission standards for both historically black and white universities. The study

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found that the state enrolled 736 fewer African American students in 1996 than it had in 1976, a decline of 38 percent, despite the existence of a summer developmental program geared at assisting students accepted to the state’s universities on a conditional basis. Whereas a variety of reasons might explain the lack of effectiveness of the program—for example, ineffective promotion to the targeted community—a review of the state’s attempts at desegregating its institutions in light of the 1992 ruling of United States v. Fordice points toward the inadequacy of relying on race-neutral policy and outreach in promoting access and social equality.

**CRITICAL MASS: THEORETICALLY AND EMPIRICALLY DEFINED**

Although opponents see it as a synonym for quotas, critical mass has been defined by supporters of affirmative action as enough students so that one individual from a group does not feel like an exception. Critical mass contains enough individuals to counter silencing due to isolation in the classroom (Gudeman 2001). This provides a sense of safety for minorities in expressing alternative views on race, ethnicity, or gender (Gudeman 2001). Critical mass centers on promoting a positive climate for students via the increased safety and comfort of providing potential allies for those from the same group, thereby yielding increased participation within the classroom. Such action lessens negative consequences of a lack of diversity, such as stereotype threat (Steele 1997), and microaggressions, such as the sense of isolation a student may feel when representing his or her race.

The findings of a study of Latino alumni from the University of Michigan School of Law suggest the impact isolation had on the group’s perception of its classroom experiences. Although 44 percent of white and 33 percent of black alumni valued being called to answer questions posed by their instructors, only fourteen percent of their Latino peers placed high value on this experience. This work concluded that “being part of a very small, but visible minority can put tremendous burdens on students...[as] they may regard themselves as ‘tokens’ and feel the quality of their answers have implications for how all...fellow [group members] will be regarded” (Barbara Grutter v. Lee Bollinger, et al., Brief no. 02-241, p. 23).

Tokenism harms both minority and majority students by facilitating racial stereotyping and alienation. Establishing a critical mass of a particular group ameliorates these effects by exemplifying intragroup diversity, which demonstrates a myriad of experiences and perspectives within a given underrepresented group. In sum, having a critical mass of underrepresented minorities allows people to be individuals rather than members of a group and shows those outside of the group that diversity exists within a given population. The failure of race-neutral policy to establish a critical mass of persons of color demonstrates the weaknesses in employment of such policies and the subsequent negative effect on student engagement and campus climate.

**CONCLUSION: THE FUTURE OF RACE-SENSITIVE APPROACHES IN HIGHER EDUCATION**

The call by opponents of affirmative action for the Supreme Court to declare race-based affirmative action policies at the University of Michigan and its law school unconstitutional derives from their faulty assumptions and adherence to negative social dogma regarding minority ability, performance, and promise, which has yielded a divided stance regarding the issue within the Bush administration. Despite President Bush’s condemnation of affirmative action, Colin Powell and Condoleezza Rice have stated their recognition of the importance of race-based policy (Bowen and Rudenstine 2003). Opponents view affirmative action in terms of extra, not equity. They suggest that the Equal Protection Clause says race cannot be used as a determining factor in admission, holding that the Clause does not apply with regard to alumni, athletes, and individuals offering geographic diversity to a student body. Opponents further erroneously contend that minorities were not equally qualified in the Grutter case and subsequently advocate race-neutral policy.

Despite such criticisms, evidence of expert witness testimony in the Grutter case suggests compelling justification for use of race in postsecondary admission. Through the analysis of systems that have used race-neutral policy, such as in California and Texas, researchers have provided convincing evidence of the failure of neutrality in achieving a racially diverse student population.

The projected continued increase in the nation’s minority population calls for critical evaluation of race-neutral distribution strategies and longstanding social constructs used to justify their continued application. Values inherent within these constructs counter progress in establishing postsecondary diversity and equal access by the continued marginalization of less powerful groups. The use of race-based policy promises to contribute to evening the social playing field for underrepresented minorities via expanding access and choice of both undergraduate and graduate institutions and subsequently improving the social and economic mobility of these groups. Thus race-based policy in higher education may serve as a viable tool in constructing racially diverse academic communities and campus climates reflective of a healthy, multiracial democracy. This expansion of opportunity and increased number of minorities within the professions and leadership positions promises to contribute to the gradual decline of institutional and social racism (Moses 2001).

**References**


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A decade ago I enjoyed several opportunities to pontificate on the changing world of collegiate registrars. The point then was that we were quickly leaving the analog world where our business practices and student services were dominated by atoms—paper, forms, inked signatures, mailed student course schedules, payment by check (can you believe cash!), student ID cards, and so on. The world we were quickly entering was the digital world where services were represented by computer bits and bytes (as in, “This computer has a 32-bit processor with 64 megabytes of RAM [random access memory] and 68 gigabytes of hard disk space”). We had gone digital! Students were registering on the Web, grade reports were replaced with portal-like secure applications, automated degree audit reports replaced advisor checklists, and traditional publications such as the course catalog and course-offering brochure were published online.

But the shift to a digital world was not once and done; responding to new constituent demands and expectations remains a continuous, incremental process. Freshmen starting on college campuses fall semester 2006 were likely born in 1988, many years after the start of the digital age. Today’s freshmen, the Net Generation, have grown up with the digital world. From their perspective, the digital advantages we benefit from every day have always been available. Whereas those of us in the Boomer Generation are just starting to feel comfortable with substituting e-mail for snail mail, the Net Generation views e-mail as snail mail. Their preferred methods of communication are cell phones, instant messaging, and text messaging. This is more than a generation gap; it represents a continuing challenge to adopt and deploy technology to better serve our current and future generations of students.

A significant issue that directly impacted collegiate registrars in recent years has been the physical protection of institutional documents—transcripts and diplomas. As inexpensive personal computers and high quality printers became commonplace, the printing of official transcripts on plain white paper no longer remained an acceptable practice. Security paper entered the scene and is now the standard for the printing of official transcripts. Even so, the security features of security paper continue to escalate as the technology of color printers and copy machines also continues to improve. After all, if a high quality copy machine can produce facsimiles of U.S. currency, why should registrars believe that their transcripts cannot be copied, altered, or fabricated? Document security and authenticity is not only a concern of the registrar, but also, even more so, to the recipient of the transcript.

Just as collegiate registrars have replaced arena registration, grade reports, and printed course schedules with their digital counterparts, it is now time to replace the printed transcript with its digital equivalent. The value proposition driving this transformation is threefold: improve service to students (current and prospective) and alumni, reduce institutional costs, and step up the efforts to reduce (ideally eliminate) fraud and diploma mills. An interesting question is, What does it cost to print and mail a transcript? If only direct costs (paper, envelope, and postage) are considered, the cost of preparing and mailing a single transcript is likely near one dollar. However, if both direct and indirect costs are considered (by the way, a more accurate cost analysis), the real price of preparing and mailing a transcript is likely in the range of eight to fifteen dollars. The price of staff time is expensive, as is the price of purchasing and maintaining printers, toner cartridges, and so on.

**What Is a Digital Transcript?**

Given the ubiquitous nature of e-mail, does this simply mean that we transmit a digital transcript as an e-mail attachment? Definitely not! Of all the Internet protocols, e-mail is among
the least secure technologies. A digital transcript needs to satisfy three fundamental requirements:

- The authenticity of both its source and content must be able to be proven using reasonable and available methods.
- The technology must be compatible with existing business practices.
- The recipient of the transcript must easily be able to receive and use the document.

Digital transcripts are also defined along two usage dimensions: they may be digital documents used for more traditional form and function, or data streams used primarily to update automatically the recipient’s institutional database. In the former, the transcript is one document of an applicant’s admissions file or employment portfolio, and its content will likely be examined by multiple reviewers. In the latter, there are specific data points such as the completion of specific courses or the transferability of courses based on a course abbreviation and number and grade that are important to the admission decision.

DATA STREAMS

There has been a long and somewhat successful history with the sending and receiving of transcripts as data streams. The American Association of Collegiate Registrars and Admissions Officers (AACRAO) has provided professional support for Electronic Data Interchange (EDI) technology. The AACRAO Committee for Standardization of Postsecondary Education Electronic Data Exchange (SPEED) has sponsored numerous workshops, conference presentations, and professional dialog in support of EDI technology. Simply stated, EDI is the transfer of data between different schools and organizations using networks. The data are typically sent as a batch once a day. In the higher education sector, the most common EDI network is provided by the University of Texas–Austin and is commonly referred to as the “Texas Server.” Numerous EDI standards have been adopted relative to sending and receiving academic transcripts.

In recent years, the Postsecondary Electronic Standards Council has provided technical standards for the exchange of transcript data streams using XML (extensible markup language). Unlike EDI, XML is a point-to-point data exchange, does not require the use of a network, and is typically transmitted immediately. Both EDI and XML data standards provide common data definitions that facilitate the exchange of structured information. To use these technologies, the sending school must map its transcript into the approved standard, and the receiving institution must unmap the data into its institutional database.

DIGITAL DOCUMENTS

Any computer document, regardless of its format or origin, is a digital document. To easily exchange digital documents in a ubiquitous manner, there are two practical issues: first, being able to receive and view the document without requiring proprietary software and second, enabling multiple forms of presentation including text, multiple fonts, and graphics. Perhaps the most common and popular technology that satisfies these requirements is the Portable Document Format (PDF), which has been developed by Adobe® Systems. PDF documents are graphical representations of the original document and present text, fonts, images, and graphics identical to the original document. Adobe® has extended PDF to the open source community, and there are multiple open source programs that allow PDF documents to be created without any usage payment or royalty to Adobe®. Similarly, there are also multiple programs that allow PDF documents to be viewed, including the free and popular Adobe® Reader® software distributed by Adobe® Systems.

The good news is that PDF documents represent a common exchange service that is hardware and software independent. The bad news is that PDF documents, in and of themselves, do not represent any level of authenticity or nonrepudiation. PDF documents can be easily created and modified.

Trusted Digital Documents

In the last eighteen months, two models have emerged that assure the recipient that the transcript, which is presented as a PDF document, has been issued by the reported sending school and has not been altered since being produced. One model relies on the use of digital certificates that are specifically related to and imbedded within the PDF technology itself. Adoption of this model requires the acquisition and installation of proprietary software used to produce the trusted digital transcript. The second model operates as a secure and trusted network in which both senders and receivers are verified as to their authenticity. Adoption of this model requires participation in the trusted network.

Both models provide a genuine capability of delivering official transcripts as trusted digital documents. The specific choice between these models will be determined by the school’s perception of and response to the following decision points:

- Cost of installing and maintaining the service: initial/ongoing costs; fixed-variable costs
- Extent to which campus information technology staff are involved with implementation and ongoing support
- Acceptance of the service by the receiver: Is it trusted? Is it convenient?
- Scalability: Will the service grow as demand increases?
- Compatible with or contrary to current transcript practices?

Trust and Acceptance

One of the real ironies with paper transcripts is that despite the genuine efforts taken by collegiate registrars to guarantee authenticity, the fact is that the typical transcript receiver has little knowledge of what the original transcript should look like. To illustrate this point, the transcript manager at Penn State University maintains a file affectionately labeled the
“Phony File.” This file contains fraudulent attempts to represent official academic transcripts. The documents in this file have been obtained by the school that made an admission decision or employer who made a hiring decision, only later to follow up regarding the applicant’s real credentials. Colleges and universities take great pride in the presentation of their academic transcript, but this same virtue has opened the opportunity for fraudulent document providers to issue fictitious documents. By the way, the ultimate insult is that some of the fraudulent documents in the Phony File look better than the real document!

With all of the genuine benefits and conveniences provided by the digital world, there is also a dark side of this environment. E-mail can be sent using false credentials, whereby the message appears to come from someone who in truth did not send it. This is commonly called spoofing. Web sites exist whose purpose is to collect user credentials (log-in identification and password). These Web sites advertise that their purpose is to help the consumer (as in, we may have experienced a problem with your banking records), yet their real function is to harvest valuable personal and confidential information. This is commonly called phishing. Spoofing to direct one to a Web site to then phish personal data has become a major source of identity theft.

The adoption of a secure digital solution also must account for the illegal and unauthorized fraudulent attempt to misrepresent a legitimate source (spoofing) or to obtain personal information (phishing). At the same time, adoption of a digitally secure approach must also be properly implemented. If the certificate approach is used, the certificate provider must be authentic and must have performed due diligence in issuing the certificate on behalf of the certificate owner. In addition, the receiver of the trusted document must be educated to recognize the difference between a valid and invalid document certificate. If the trusted network approach is adopted, the trust agent must have a demonstrated ability to insure integrity and follow sound business practices. Further, the receiver of the trusted document must be provided with a capability to validate the authenticity of the document if received outside of the trusted network. Regardless of the specific approach taken, an improperly administered secure solution will not provide a high level of trust and will not be an acceptable solution.

Closing the Gap

Although college and university registrars typically have broad and varying responsibilities at their particular schools, one universally shared responsibility is to maintain the integrity of the academic record. This common attribute is true for registrars at small vocationally focused schools as well as for registrars at large multicampus research schools. At the very heart of the registrar’s role is the mandate that the student’s
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A study of the educational system of the Philippines from basic to higher education, with information on academic and vocational degrees, and non-traditional education, including Islamic education. Serves as a valuable guide to the academic placement of students in educational institutions in the United States, with information on accrediting agencies and professional education associations in the Philippines.

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ROMANIA
A study of the educational system of Romania, includes an extensive list of sample diplomas, and detailed guidelines for admissions officers in the academic placement of students in educational institutions in the United States.

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Registrars are under considerable pressure to provide excellent services to students and alumni while often working with minimal budget increases, or, as likely, budget decreases. The old adage “do more with less” has at many schools become standard operating procedure. In this environment, it is expected for the registrar to take actions that may be local and parochial to position their transcript service within these budget and staffing constraints. This is a natural and logical response to schools’ needs, policies, and practices. However, in the larger picture, local and individual actions can contribute to creating a gap between the holders of academic transcripts and the recipients of these same vital records.

Admission officers, employment officers, and others who are on the receiving side of the transcript equation are becoming more focused in using technology and less interested in receiving mailed envelopes that include paper documents. It is quite typical that the “mail room” at many schools and organizations has been transformed from a series of mail distribution boxes to a document imaging environment. The incoming mail is opened, scanned, and indexed; the original paper document may not get much farther than the loading dock! Regardless of the receiving organization’s desire to work with trusted digital documents or data streams, the traditional paper transcript is contributing to an increasing gap between the originator and the recipient. This author suggests that the role of the registrar extends beyond the school and students/alumni and extends to the larger audience of individuals, schools, and organizations that depend on official transcripts to make serious and life-changing decisions.

**Is It the Beginning of the End?**

With all of these issues stirring, some have asked, Is this the beginning of the end for paper transcripts? Given the cost of preparing and mailing a printed transcript, the latency and sometimes uncertainty of delivery (even overnight service is not fast enough for the Net Generation), and the exploding growth of fraudulent document providers, perhaps we are seeing the beginning of the end of printed transcripts. However, a much more significant question is, Is this the beginning of the end for the integrity of what is represented by the academic transcript? Every college and university across the country has its own academic reputation to uphold. The promise of secure digital academic transcripts that can be produced more efficiently, that can be delivered instantaneously, and whose authenticity is nonrepudiated will result in upholding the brand name and reputation of individual schools and the academy. Can the academy afford to not go digital with one of its most important academic records? Like previous sea changes such as the elimination of arena registration, the delivery of student services through secure Web applications, and the elimination of paper-based publications, the adoption of digital transcripts is inevitable.

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Don’t Brown the Latinos

by Amitai Etzioni

Students applying for admission to colleges in the United States are typically asked to identify their race. The lists of options students are offered to choose from pose two problems. The first problem is faced by students who do not wish to be racially defined, and prefer to simply present themselves as Americans. The other problem is for Hispanics, the most rapidly growing part of the population. Some Hispanics see themselves as black, some as white, and most as neither. (In the 2000 U.S. Census, 2 percent of Hispanics chose the option black, 48 percent chose white, 42 percent chose “some other race,” and 6 percent chose more than one race). Colleges deal with these challenges in different ways (oddly, many of the same colleges provide different classifications for applicants to undergraduate and graduate divisions). Often the message that their admission forms impart, surely unwittingly, is that 1) wishing not to be racially identified is out of line if not outright unacceptable and that 2) Hispanics are a race unto themselves.

One may ask: Who cares about such matters of terminology? What does it matter what it says on some form that students typically face once in their lifetime? The fact is that when students anxiously seek admission to their colleges of choice, they tend to study admission forms long and hard. Most will go a long way to accommodate what they consider to be signals from the college that they are keen to make their home in the future. If the form asks about voluntary work, they will spend evenings and weekends volunteering. If the form asks for a personal essay, they will spend many a day and night trying to figure out how to best present themselves. And, whatever the form implies about their race, they will take very much to heart. Last but not least, some colleges explicitly state on their admission forms that this information will be used in determining who will be admitted and who will receive scholarships. Few will take such a message lightly.

Race versus Ethnicity

Social scientists have shown that race is merely a social construction, a label people stick on others, which has little objective meaning. I grant that race is a social construction, but it’s an immensely powerful one. In our society, to define a group of people as a distinct race and for them to come to see themselves in this way is to set that group much farther apart than it otherwise would be. It is to create a divide where there used to be only a space. Race is a place you cannot leave, nor can your children, nor can theirs. Ethnic lines are much more muted and apt to blur in your future. The difference between race and ethnicity is vast: Race is considered a biological attribute, a part of your being that cannot be dropped or modified. Ethnic origin, in contrast, is in your past; it is where you came from. You can keep as much or little of it as you please. Many people play it up in some periods of their life or down in others, and so do their children. Any way you cut it, racial differences are divisive, but ethnic ones are part of the mosaic that makes up America.

The rapidly growing Hispanic population is in a unique position in this matter at this stage in American history—will they be socially constructed as a race or as an ethnicity? If Hispanics are to be viewed as a distinct race, as brown Americans, and above all if Hispanics develop the sense of disenfranchisement and alienation that many African Americans have acquired (often for very good reason), America’s divisions of the worst kind—immutable categories of race—will expand their reach and power. If, on the other hand, Hispanics will see themselves as members of one or more ethnic groups, this will go a very long way toward marginalizing race in America and those who thrive on promoting it. Just as to be a member of another race (whatever it is) is to set you apart, so being a member of another ethnic group is to be a “normal” American. All Americans are expected to have dual ethnicities, to be
Polish-, or German-, or Anglo-, or Italian Americans. Adding to this collage Cuban Americans or Mexican Americans is as American as apple pie.

What Colleges Do

NO OUT

Several college admission forms are helping construct Hispanics as a distinct race rather than a conglomeration of ethnic groups by requiring Hispanics to declare their race. The University of Texas, for instance, is one of the universities that does not indicate that the racial question is optional. Indeed it is mandatory. True that the university calls the classification “ethnic background,” but all the categories other than “Hispanic” are racial. “Hispanic” is simply added to the list as if it were another race.

Here is the way the form lists the options:

- American Indian or Alaska Native
- Asian or Pacific Islander
- African American, Black
- Hispanic or Latino
- White Non-Hispanic Origin

SECOND WORST

Quite a few colleges use the same or very similar classifications, but differ from the University of Texas mainly because they inform the students that answering this question is optional. Moreover, some colleges offer an alternative for students who do not identify with the available options or do not wish to box themselves in racially by providing a box for “other” or “choose not to report.” There is no such alternative on the University of Texas form.

Here is the basic pattern followed by scores of schools including Southern Methodist University, Bowling Green State University, and the University of Connecticut:

- Black/African American
- White
- Asian/Pacific Islander
- Hispanic/Latino
- Native American/Alaska Native
- Other

Although the “other” alternative gives students a theoretical way to opt out, the option is not a very attractive one. The label “other” or “choose not to report” is hardly a flattering way to characterize those who wish to buy out of the racial scheme. “Other” sounds like “alien.” And “choose not to report” implies that you have something to conceal, and sends the message that “Fine. If you do not wish to tell us, we will let you get away with it.” One cannot but assume that colleges could better accommodate those who wish to “deracialize” by offering them a more attractive option, such as “nonracial” (or my favorite, albeit perhaps too cute by half, “all-American”).

A VARIATION

The common application used by some 300 colleges, including most of the Ivy League, offers somewhat different options. Students are asked “If you wish to be identified with a particular ethnic group, please check all that apply (optional).” However, the list of options they are given are racial plus Hispanics. Students are also offered the opportunity to select their specific country of origin. In effect, this means that ethnicity comes in as a second classification. The menu of options is as follows:

- African American/Black
- Native American, Alaska Native (Select tribal affiliation)
- Asian American (Select countries of family’s origin)
- Asian, including from Indian subcontinent (Select countries)
- Hispanic, Latino (Select Countries)
- Mexican American, Chicano
- Native Hawaiian, Pacific Islander
- Puerto Rican
- White or Caucasian
- Other (Specify)

By including the “white or Caucasian” category, this form implies that all Hispanics are non-white (in contrast to the widely used term “non-Hispanic white”). Although students are permitted to choose more than one option, the message is nonetheless that “white” and “Hispanic” are distinct categories. The truth is far from it. Indeed, 48 percent of people who identify as Hispanic also identify themselves as white.

The Media Too

These colleges are not alone; the media is currently in the habit of similarly radicalizing Hispanics by frequently listing them as an implicitly racial group alongside blacks and whites. For example, the St. Louis Post-Dispatch reports that “the same number of African-Americans, Hispanics and Asians are opposed to abortion as whites” (January 29, 2006, A1). The Economist states, “the obvious correlation is with economic status: whites and Asians are at the top of the heap while Latinos and blacks struggle at the bottom” (March 11, 2006, p2). This formulation tends to make the reader think that we are dealing with a racial line-up, although one could interpret such comparisons as referring to two or more racial groups and one ethnic one. There is no room for doubt, however, when reporters refer to Hispanics explicitly as a racial group. The Wall Street Journal informs us that “racial disparity abides among U.S. children, 25% of which will be Latino by 2020” (July 20, 2005, A1). A Los Angeles Times reporter writes, “to ease racial tensions, black prisoners had been separated from Latinos. Inmates of both races complained that they had not been allowed to shower, phone home, or put on clean clothes” (February 10, 2006, A1).

Thus college forms and the media reinforce each another in a direction that makes America more divisive. Before we
travel any farther down this road, we should at least consider an alternative.

Drop Race
We would be much better off if we dropped racial categorization all together as the French do. If and when we must classify people by their backgrounds rather than by their achievements, we ought to do so according to country of origin (which is an ethnic marker). Berkeley and UCLA have designed their admission forms in ways that move us in this direction. Their forms essentially follow the pattern below:

- African-American/Black
- American Indian/Alaska Native
- Chinese/Chinese American
- East Indian/Pakistani
- Filipino/Filipino American
- Japanese/Japanese American
- Korean/Korean American
- Mexican/Mexican American/Chicano
- Pacific Islander
- Vietnamese/Vietnamese American
- White/Caucasian (includes Middle Eastern)
- Other Asian (Not including Middle Eastern)
- Other Spanish-American/Latino (includes Cuban, Puerto-Rican, Central American, South American)
- Other

An even better scheme would separate African Americans from Caribbean Americans and other people considered “black” by the Census, such as Haitians and those who hail from Jamaica and Trinidad. These populations have faced different historical challenges and often have different needs. For example, they did not share African Americans’ history of slavery, but they often face the challenge of learning English as a second language. In this way race would become less of a factor and country of origin, and all that it implies, would gain in importance.

Affirmative Action Need Not Suffer
The 1980 Census allowed me and some 6.75 million other Americans to buy out of the racial boxes by marking “other”—a poor label, but nevertheless a commendable classification. Since then this option has been eliminated from the U.S. Census and replaced with “other race” in 1990 and “some other race” in 2000. Several colleges adhere to the same pattern in their admission forms. In some cases this pattern is dictated by state law. In Michigan for example, state law mandates that “multiracial” must be used and that “other” cannot be used (the University of Michigan thus uses “races not included above, please specify”).

I realize that these classifications are used to calculate the proportion of students admitted from various racial backgrounds to satisfy affirmative action goals where they are in place. The more students opt out of racial classifications, the fewer minorities campuses will be able to report that they admit. However, it seems inappropriate to pressure or, in the case of Texas, insist, that youngsters, at a very impressionable stage of their life, be racially classified against their true preferences, to improve diversity scoring. And affirmative action programs can be tailored to support people of various ethnic groups (and socioeconomic class) rather than by race.

By focusing on country of origin, we would remind one another that although we all came in different boats, we now sail in the same ship. We would stress that all differences among us, although far from trivial, are transitional. That we are not different tribes that happen to reside next to each other on one piece of land, but that, when all is said and done, we are one people.

ABOUT THE AUTHOR
Amitai Etzioni teaches sociology at The George Washington University. He is the author of several books, including The Monochrome Society (Princeton University Press, 2001), and the proud father of three half Mexican American sons.
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All of these statements could have been the mantras of those encouraging the transmission of transcript data between higher educational institutions via Electronic Data Interchange (EDI). Some 650 postsecondary institutions adopted this highly successful standards-based data transmission method. However, that wonderful breakthrough in technology more than fifteen years ago does not meet all the needs of those we serve today. It took the Internet and other supporting technologies to make other options available.

This article encourages you to reexamine the world of electronic transcripts and to look at how the University of Chicago is going about this business, anew, naming the supporting cast, not as a form of endorsement—although we do like the choices we’ve made—but to clearly define the systems the University is using and, I hope, to further stimulate your thinking as to what is possible.

The Case for Electronic Transcripts

It is perhaps ironic that universities and colleges are recording and storing academic data on their current and former students in sophisticated student information systems whereas the transcripts from these systems, by a vast margin, are printed on paper and delivered via commercial carriers. Certainly this is due in part to the limitations of intended recipients; they do not have access to the means to securely accept electronic reports or data. Those who do have the means are institutions of higher education, as already mentioned, and they exchange electronic transcripts formatted to an EDI standard, and now to an XML (extensible markup language) standard.

The adage “if it ain’t broke, don’t fix it,” comes to mind concerning transcripts. We are comfortable with processing hard copy and on a limited basis exchanging data with a handful of institutional trading partners. But there are three reasons worth considering that make a case to move to electronic transcripts: 1) service, 2) efficiency, and 3) opportunity costs.

Although it is possible to order plane tickets and fly to another state within hours, with the exception of those who are transmitting data via EDI or XML, we cannot securely, quickly, or cost effectively deliver a transcript to someone in another state on the same day. (And those transmitting data via EDI/XML do so in overnight batches.) Even if you’re willing to accept overnight delivery, it costs a fortune to use next day service. You can deliver for little cost if you don’t mind how long the package takes to be received, or you can deliver quickly if money is no object. This is not service.

The report to the nation by Margaret Spellings, U.S. Secretary of Education, on the state of higher education, “A Test of Leadership: Charting the Future of U.S. Higher Education,” makes quite a case for being more efficient and accountable to our constituencies. It is therefore not unreasonable for us to become more broad-minded about leveraging today’s technology to solve what our students and alumni view as a trivial delivery problem. If we who are within the registrar’s profession do not actively address this problem, governments and businesses will. And some have already. We may not like what they come up with. The longer we wait, and the less actively involved we remain, the less likely we are to be given a choice as to what solution(s) we must use.

Each day we use obsolete methods and practices is another day lost in becoming more efficient, better stewards of the resources we have been given. Keeping Pat at the PC, printing,
folding, stuffing, and stamping means that you have a fixed approach that may not become any more productive, costs more from year to year, and possibly blinds you from discovering new opportunities, even new ways, to apply Pat’s great skills to other areas within your organization that are presently overburdened or understaffed.

What's Already Happening

One electronic model offered by emerging businesses and service companies involves directing the transcript to a “virtual printer,” one that doesn’t actually print but rather operates as a conveyor to a server somewhere. The operator’s action to print is the same, using printer icons and drivers, but the result sends the transcript data via acceptable encryption standards to a designated server. In turn, the intended recipient, another institution or other third party, is notified that a transcript awaits. A designated staff member who has been given the means, through a specially assigned log-on and password using Web-based forms—sufficient to meet e-commerce standards—retrieves the transcript. As an added service, some of the purveyors of network delivery services promise to deliver the data in a variety of forms, one to the liking of the recipient. Thus, the rubric of the day is “If you trust the pipe, you should be able to trust what’s in the pipe.” If through contract you establish fiduciary obligations and observe standard protocols, trusted service providers may be a viable answer to the puzzle of delivering transcripts electronically.

But you don’t have to trust the pipe. Pennsylvania State University, for example, has a fully contained system for digitally signing transcripts and notifying recipients how and where to get them, electronically. Since February 2006, they have signed and delivered more than 6,000 electronic transcripts. Digital signatures are new in higher education, and the technology is quite promising. The University of Chicago is also adopting digital signature technology and has chosen to knit together several technologies and service providers in a new way.

The University of Chicago’s Electronic Transcripts

This is a very simple paradigm to appreciate because it mirrors what you are already doing: preparing the document, applying an official seal to the document, and posting the document for delivery. Today, for most of us, the specific steps include printing a carefully formatted transcript report, applying a seal (embossed or ink) or applying a “wet” signature to the document, and, finally, mailing the document via the U.S. Postal Service or other commercial carrier. (Many of us simply print the transcript on specially designed paper that substitutes for the seal and signature to further automate the second step.) With new technologies, the three steps are the same, only with a digital twist: format the transcript report as a PDF (portable document format) file, apply a digital signature, and electronically notify the recipient and provide secure electronic access to the signed PDF file.

The PDF Document

Adobe Systems created the PDF, but it has long since released its claim on the standard. Although it probably cannot be considered an open standard, it is a shared standard that anyone can adopt and use. You don’t need proprietary software to create PDF files. One of the advantages of the PDF, besides its ubiquitous use, is that the software that displays PDF documents, Adobe® Reader®, is readily available and free, and is available for different operating systems. Like EDI and XML, PDF is a way to represent the data. Documents formatted as PDF files usually display well and are printer-friendly. The output on paper is very predictable and reliable and retains the school’s desired content format. Adobe® Reader® is often packaged with new computers, but if it is not, it is easy to download. The odds of someone not having access to Adobe® Reader® are very low.

What’s a Digital Signature?

Digital signatures are very geeky things. Operationally, unless you work in technical pursuits, you don’t encounter them, but they have been around for quite some time. (Please see the citation in “Selected References” for a tutorial from the American Bar Association.) Digital signatures involve electronic key pairs—public and private key sets—but technically speaking the signature itself is the private key. You buy a digital signature from a special organization called certification authority. Besides giving you the means to create and use a digital signature with electronic documents, on an ongoing basis the certification authority validates your digital signature when the validation check is performed. The certification authority knows who you are because your public key is registered with them. (They don’t possess or know your private key—only you have that. Hence the name “private key.”) When you apply a digital signature to an electronic document you apply an encrypted version of your private electronic key to the document. When your private key matches up with your public key at the certification authority—presto!—your identity is revealed. A sample public key is shown in Figure 1, on page 43.

There is another part to digital signatures that makes them even more special and secure. In the course of applying the signature, the document content is verified. So, when a signature is successfully validated, it also means that the content of the document has not changed. Additionally, software is available that will enable you to later “revoke” a digital signature on a particular document should it be necessary, preventing the recipient from even opening it. Now, can you do that with paper?

Fortunately, you don’t have to learn how the fuel injector works on your car to drive one. Likewise, you don’t have to learn the underlying technology of digital signatures to use them. Digital signatures have been tested in court, and the technology is sound.
TWO DIFFERENT EXPERIENCES WITH DIGITAL SIGNATURES

At the University of Chicago, we selected the one solution that takes the guesswork out of digital signatures. Working with Adobe Systems, GeoTrust (now Verisign), and Avow Systems, we are implementing the Certified Transcript Service (CTS). This service features instant validation: When a recipient opens a digitally signed PDF file using Adobe® Reader® (version 6 or higher) or Adobe® Acrobat®, the next best thing. That is, we are notifying the recipient through e-mail that an electronic document is available for pickup and then giving him/her the means to access the document in a safe and secure manner. The mechanics of this delivery method requires sending the recipient two e-mail messages. The first displays a URL (uniform resource locator) that directs them to a secure server where the document is temporarily stored. The second contains a password that provides access to the document. This may seem a bit awkward, but the target audience for these electronic documents is a willing party. We believe asking the recipient to process two e-mails will not be too burdensome, especially because it is presumed that the recipient is looking for the document in the first place.

Putting the Pieces Together

The University of Chicago has outsourced its service because it has chosen not to manage all the components of this solution. In addition to Avow Systems and GeoTrust, the University has asked the National Student Clearinghouse to deliver e-mails to recipients. The Clearinghouse has a larger customer service staff to assist us in answering questions about this solution or other service issues. The full solution is: 1) the University sends transcripts electronically “wraps” individual files so they can be sent electronically “wraps” individual files so they can be sent to Avow Systems; 2) Avow Systems applies the University of Chicago’s digital signature to the documents; and 3) the Clearinghouse prepares the digitally signed transcripts from Avow Systems and matches the transcripts for delivery to intended recipients. How are the files being transferred safely between these two organizations? Via the Data Transport standard (I hope you opt for the “instant validating” solution), setting up a server to manage how and where to pick up the files. This is a new open standard for data transport supported by the Postsecondary Electronic Standards Council. The DTS electronically “wraps” individual files so they can be sent safely across the Internet and processed immediately. This approach could put an end to batch processing!

Discussion

The University of Chicago supports the open standards movement. We have been sending XML file transcripts to the American Medical College Application Service since April 2006. Although sending data via XML (or EDI) is a highly desirable method, not everyone has this capability. Other electronic methods or service providers must be devised if we hope to serve everyone. Granted there are a number of choices through which individuals can choose cost-for-value analysis, availability and stability of service providers, and
how transcript automation will evolve and under what critical principles.

One of the first questions, it seems, concerns the cost of the digital signature solution. In general, you can expect the digital signature solution to cost from $1.50 to $3.00 per document, depending on how you put the pieces together. Those who believe this is expensive should compare the cost of the solution to all their current baseline costs, including stamps, paper, envelopes, time, and labor. Yes, the cost of time is included. This begs the question: On whom falls the burden for providing speedy delivery? Is it acceptable to proffer, (S)he who wants faster service than the U.S. Postal Service routinely provides should pay for it? We must come to grips with today’s expectations and standards.

As commercial interests are excited by the prospect of serving this awakening marketplace, the solution options will proliferate. Across our desks have come more recent solicitations from vendors offering transcript services. Docufide, Inc., from Los Angeles, California, won a request for proposal to service the transcript needs of twelve states in the Middle West (see Midwestern Higher Education Compact reference). They are concentrating on secondary schools, but they also have in their market plan to approach postsecondary schools. SCRIP-SAFE, Inc., of Cincinnati, Ohio, familiar to most of us as the purveyor of safety paper, has introduced an exquisite online service to connect postsecondary institutions with one another so electronic files—initially PDF files, later XML files—can be sent securely from point to point. SCRIP-SAFE starts with serving the interests of the higher education community, and because an unusually large percentage of its management and sales force are ex-registars, they can be counted on to listen to the needs of our community first and foremost.

Other companies that are ready to serve our transcript delivery needs to varying degrees are XAP, Inc., from California, ConnectEdu, of Boston, and Triand and National Transcript Center, both of Austin, Texas. All support open standards, and each plans to deliver files electronically to the preference of the recipient. But under what rules will they play? How will they handle your data files? What about the bad guys—will they be able to exploit this glut of options? And when these businesses offer low-cost solutions, how are they going to get paid or make a profit?

At the University of Chicago, we have firmly planted a stake in the ground by choosing digital signature technology because we believe that it is the most expansive and extensible solution. That’s not to say that we won’t use other services too, as we already do with the open standards XML solution or from a business partner such as SCRIP-SAFE. But there is real comfort in knowing that through digital signatures, each individual file is protected at all times. Each person who opens a digitally signed transcript can know what they are...
looking at, who signed it and when, and if it is authentic. Although point-to-point networks give the person who downloads the file the confidence that the file is authentic, when the file moves from that person’s desk, authenticity may be questioned. And although special online authentication regimens are possible, digital signatures (as described above) are automatically authentic. Alternatively, backgrounds and watermarks in PDF files help (in that they can make an individual file appear unique), perhaps drawing a closer association to the school providing the data in the PDF file, but as with the paper today’s transcripts are printed on, there is no guarantee that these graphics can’t be copied or authentication methods replicated.

Additionally, at the University of Chicago, we have our sights set on more than transcript distribution; we want to be in a position to distribute electronically every conceivable official document. We’re thinking about applying digital signatures to grade reports, enrollment verifications, degree verifications, diplomas—yes, PDF file versions of diplomas—financial aid award letters, admissions letters, and more. We believe that the new paradigm is secure electronic documents, period.

Although there is much to consider when embracing the world of electronic transcripts, and it is prudent to be cautious, we must be proactive and get involved. You should be aware that businesses setting their sights on higher education won’t always approach only administrators in charge of producing transcripts (registrars). They will approach senior officials inside your institution. And they will approach state leadership—that is, boards of regents, departments of instruction, and others. This issue will probably come to you whether you are ready for it or not.

We can and must determine to what standards we are going to hold those who develop solutions. Let’s start with ascertaining our interests. Institutions of higher education are different from secondary institutions, and our interests must be separated and articulated. Where there are common interests, let’s join causes, but where interests are different, let’s commission for solutions to meet those differences. This is the beginning of the end of paper transcripts, and what comes next may take many forms, go in many directions. Your thoughtful consideration is needed now if we are to have lasting, successful solutions that meet all our needs, and the needs of those we serve.

Further Reading

- Digital Signatures:
  - www.abanet.org/scitech/ec/ise/dsg-tutorial.html
    #Implementation_of_public-key_digital_signatures

- Midwestern Higher Education Compact:
  - www.mhec.org

- Postsecondary Electronic Standards Council:
  - www.pesc.org


ABOUT THE AUTHOR

Thomas Black is the Registrar at the University of Chicago. He has worked in higher education for more than 30 years in various administrative positions including the registration offices of both Duke University and the University of North Carolina. Thomas is an honorary member of and frequent presenter at the Southern Association of Collegiate Registrars and Admissions Officers and the Carolinas Association of Collegiate Registrars and Admissions Officers. He also presents regularly at the American Association of Collegiate Registrars and Admissions Officers national conferences. Thomas has a master’s degree in education from Pennsylvania State University, where he graduated magna cum laude and was a member of various honor societies.

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Data Mining, Predictive Modeling, and Recruiting Targets

by Tracy Jones and Anthony Vaiciulis

In an effort to make the best use of its financial and personnel resources, the Division of Graduate Studies at the University of Central Florida has started to take a new approach to better focus its recruiting dollars and strategies. While communicating with all admitted students at UCF, the Office of Graduate Recruiting, within the Division of Graduate Studies, wanted to target its recruiting dollars specifically on communications to those students who had the potential to be persuaded into attending UCF for their graduate education. A partnership was formed with the Department of Statistics and Actuarial Science to apply statistical methods to historical data to build a model that would allow the Division of Graduate Studies to predict which admitted students are likely to enroll in a UCF graduate program. A logistic regression model will be implemented to predict student enrollment for the fall 2007 semester. Targeted communications will also be sent to those students predicted to be undecided about attending UCF for graduate work. Communication interaction, survey results, and yield rates will be compared with current numbers to determine if this model and targeted communications are responsible for increases in enrollment.

Knowing that of the students accepted each term into the University of Central Florida, some fraction would enroll, some might enroll, and others would choose not to enroll, the Division of Graduate Studies decided that if it had a model that predicted whether or not a particular student is likely to enroll, it could better allocate its resources to improve the overall quality of students who do enroll. For example, a fellowship may be offered to a particular high quality student who might otherwise be predicted not to enroll.

After creative discussions and brainstorming sessions, a partnership was formed with the Department of Statistics and Actuarial Science. The initial goal was to apply statistical methods to historical data and then build a model that would allow the Division of Graduate Studies to predict which admitted students are likely to enroll in a UCF graduate program. This model would be used to improve student quality, more accurately predict enrollment totals and financial needs, and also allow for targeted recruiting dollars and communications. Because one of the enrollment goals of the Division of Graduate Studies is to increase enrollment in the science, technology, engineering, and math (STEM) areas, the data analyzed in this study were specific to the STEM graduate programs at UCF.

Method
The statistical method discussed here is a “supervised learning” technique, meaning it must be presented with a large number of observations (applications, in this case), each consisting of predictor variables and the response (whether or not the student enrolled). A mathematical model is then used to create a rule that can predict the response given only the predictor variables. The data used in this analysis were collected from several sources to form a single datamart containing all of the information deemed useful. This datamart consisted of 71,692 applications to UCF Graduate School programs from 1999 to 2005. Due to a significant change in the application procedures just before 2004, only 2004 and 2005 data are used to build a predictive model.

The statistical software packages Enterprise Miner and SAS (SAS Institute Inc., Cary, NC), and R (R Foundation for Statistical Computing, Vienna, Austria) are used to analyze the data.

The predictors include the following: specific graduate program and college to which student applied, academic level of program (e.g., doctoral, master’s), gender, ethnic group, birthday, citizenship status, native country, whether student
previously inquired about a UCF graduate program, Graduate Management Admission Test (GMAT) score, Graduate Record Examinations (GRE) score, Test of English as a Foreign Language (TOEFL) score, grade point average (GPA) for last 60 hours of undergraduate classes, numbers of colleges and programs to which student applied in current term and in previous terms, whether student went to a "top 100" university as well as the university name and type of degree earned, whether student enrolled before at UCF, whether student completed undergraduate studies at UCF, and year and specific term for which student applied.

We first performed various cleaning and exploratory data analysis tasks including identifying and removing duplicate observations, checking for invalid variable values, checking for consistency among related variables, and creating derived variables (e.g., transforming birthday into age). We removed all applications corresponding to students who were not admitted as these could not be used in the supervised learning process described above.

Missing values and categorical predictors were considered next. The predictor age, for example, was missing in 0.4 percent of the applications whereas GPA was missing in 15 percent of the applications. For predictors such as age, with a small percentage of missing values, the value of the predictor was set to the most frequent value (i.e., age was set to 22 if missing). For predictors with a larger percentage of missing values, a statistical model was used to estimate the missing value based on the values of other predictors in the same application. Special care was taken with categorical predictors (nonnumeric predictors) such as native country and college attended. Each categorical predictor was transformed into a series of binary predictors, which are more easily used by predictive modeling techniques. After all preparations were made, the total number of applications corresponding to students who were accepted into a STEM program was about 4,000.

The main method used to build a predictive model using the datamart is logistic regression, a standard type of regression model well suited to problems with a binary response (e.g., student enrolled or did not enroll). Given the values of the predictors, a linear regression model predicts the value of a continuous response whereas a logistic regression model can be used to predict the probability that a binary response takes a certain value. For example, what is the probability that a particular applicant will enroll?

In a logistic regression model, assumptions are made about the relationship between the predictors and the response. To minimize the effect of these assumptions, transformations of continuous predictors such as age and GRE score were examined and used in place of the original predictors where appropriate. Interactions between predictors were also considered. For example, the relationship between the predictor age and the probability that a student enrolls may depend on the value of another predictor such as native country. If true, this interaction between the predictors age and native country must be explicitly taken into account when building the model. A stepwise selection procedure, incorporating each predictor term into the model one by one, was used to build many logistic regression models. These models were built using only part of the available data. Another part of the data was used to determine the best model based on misclassification rate. If the model predicts a student will enroll but the student does not enroll, this is a misclassification. Other statistical models were investigated, but for this first attempt at applying data mining techniques to this dataset we focus on the well-known logistic regression model.

Results

The result of the logistic regression model-building process is a prediction rule in the form of a mathematical formula that gives each predictor a different weight depending on the strength of its relationship with the response. This formula can be used to estimate the probability that an admitted student will enroll given the value of the predictors in the model. Figure 1 is one way to graphically summarize the performance of the model when it is used to predict which of the admitted students for year 2006 will enroll. The vertical axis is the true positive rate—of the students who enrolled, what fraction did the model predict would enroll? The horizontal axis is the false positive rate—of the students who did not enroll, what fraction did the model predict would enroll? The black circles show the true positive rate versus false positive rate. The lines above and below the black circles are an estimate of the 95 percent confidence interval for the true positive rate at a given false positive rate (Macskassy 2005). For example, a false positive rate of 0.5 (50 percent) corresponds to a true positive rate of about 0.81 (81 percent). When applied to future data, the true positive rate is expected
to lie between 77 percent and 89 percent. This is much better than the 50 percent true positive rate that would be achieved by randomly guessing which applicants will enroll.

Conclusion
Now that the testing has been completed and we are comfortable with the outcome predictions, the logistic regression model will be implemented to predict student enrollment for the fall 2007 semester. In addition to the standard acceptance communications, targeted communications will be sent to those students predicted to be undecided about attending UCF for graduate work. Communication interaction, survey results, and yield rates will be compared to current numbers to determine if this model and targeted communications are responsible for an increase in enrollment.

Further Study
Next steps for this partnership will be to examine the need to have separate models for different types of students. Student types being considered for analysis are full-time versus part-time, doctoral versus master’s, STEM versus non-STEM, and those with financial package offers versus those without. Because there are currently only 23 predictors in the STEM model, the Division of Graduate Studies is also considering asking additional questions on the application that may be important predictive indicators, thus making the overall model more accurate.

References

ABOUT THE AUTHORS
Tracy R. Jones has been the Executive Director for Graduate Studies and the International Service Center at the University of Central Florida for the past three years. Tracy has implemented the PeopleSoft system for the Graduate Studies Division and has revised and integrated all business processes in the recruiting, admissions, student services, records, and international offices. Tracy holds a bachelor’s degree in Business from Florida State University, a master’s degree in instructional systems from the University of Central Florida and is currently a doctoral candidate in educational leadership also at the University of Central Florida.

Anthony Vaciulis is a former physicist whose interest in predictive modeling led him to enter the Data Mining Program at the University of Central Florida, where he will obtain a master’s degree in May, 2007.

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**Strapped: Why America’s 20- and 30-Somethings Can’t Get Ahead**

**BY TAMARA DRAUT**
DOUBLE DAY, 2005. 237 PP.

Reviewed by Travis Reindl

It’s an argument almost as old as time itself—the exchange of anecdotes and accusations between and among generations about who has had a tougher go of it, and who is responsible for that state of affairs. In *Strapped*, analyst and commentator Tamara Draut pushes beyond the “I walked to school uphill both ways” storyline with a data-rich indictment of the market practices and public policies that are hobbling the nation’s 20- and 30-somethings in their pursuit of the American Dream. Buttressed by stories of struggling young adults, it offers a sobering assessment of our human capital pipeline. Ultimately, though, it misses the boat on several crucial points, leaving this analyst (and 30-something) a little cold.

Draut hits the mark in outlining the convergence of forces that threaten the middle class prospects of Generation X and the Millennials. Rapidly rising educational costs and expectations are creating a new debtor class of Americans, who rack up five- and six-figure financial obligations before they even leave home. The New Economy’s labor market, which prizes speed over stability, hazes a growing number of its newest entrants and diverts them into temporary work unrelated to their training. Deregulation of industries such as mortgage and credit card lending has given rise to practices that target the cash-poor and keep them that way. Government retrenchment has weakened the social safety net, from student aid to childcare to housing.

Through glimpses into the lives of young Americans from a wide variety of backgrounds and circumstances, the book puts a face on the numbers that many policymakers and analysts know all too well. The reader is introduced to Carolyn, a teacher, and Ryan, a police officer, trying to make ends meet, a task complicated by the struggle to secure quality, affordable daycare for their two young sons. For Jerome and Wanda, the economic and professional promise of obtaining master’s degrees dissolved into stress and frustration in the face of a layoff and prolonged unemployment. Clayton’s story is one of a high school guidance counselor and single parent juggling daily expenses with college savings for his children and payment of his own school debt. These are more than hard luck vignettes—they are a warning that working hard and playing by the rules may not be enough in the system we are building.

Unfortunately, Draut is her own worst enemy, both anecdotally and analytically. She undercuts her portrait of an increasingly Darwinian transition to adulthood with stories of people whose situations are as much the product of poor choices and skewed priorities as they are of unfavorable circumstances. Elaine, for example, finds herself $40,000 in credit card debt, but feels that having new furniture, a trip to Europe, and the ideal wedding have been worth the price. In the case of David and Lisa, building the 401(k), flying cross-country to family events, and finding a home that enables their toddlers to have separate bedrooms rivals paying off $40,000 in credit card debt on the “to do” list. Perhaps this reviewer has just become curmudgeonly at the ripe old age of 34, but the argument that attending college friends’ weddings is a necessity, even at the price of financial stability, is questionable.

This shortsightedness carries over into her assessment of some of the causes of and solutions for the plight of our generation. Draut pins a great deal of blame on a phenomenon she calls “Reaganization,” a combined denigration of the public sector and glorification of private gain that has made young adulthood a “paradise lost” from what our parents enjoyed. This analysis completely misses the role that recent generations have played in promoting and sustaining a massive
There's always an opportunity for Change...

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consumer culture, one in which certain goods and experiences have been deemed essential for an acceptable standard of living, whatever the cost. While corporate America most certainly has demonstrated its failings, it cannot be accused of foisting its wares on an unwilling public. Similarly, the reduction and reallocation of public resources did not occur in a vacuum—voters, including those in the under 40 crowd, have elected and re-elected leaders with priorities other than building and sustaining human capital.

Similarly, the bulk of Draut’s proposed policy initiatives offer a warmed-over version of the Great Society that is neither politically feasible nor practically effective. She focuses her attention almost entirely on big-ticket federal programs in an age of ballooning deficits and competing priorities. At the same time, she says virtually nothing about the role of states, cities, or community-based non-profits. Similarly, Draut offers several fixes for symptoms of problems, rather than the problems themselves. Regulating consumer credit offers a prime example of this. Passing laws that bar credit card companies from marketing on university campuses will not stem the tide of pitching plastic to young adults. Rather, creating public-private partnerships to educate students and their parents about how credit works and its appropriate uses would seem to be far more effective long-term approaches.

Strapped raises a voice in the human capital conversation that has too long been silent. Many recent decisions in board rooms and legislative chambers will have the impact of leaving our nation and its “producer” generations much less equipped to be competitive and secure in the economy that is unfolding. At the same time, Americans just entering adulthood must assume a share of responsibility for their own well being, resisting the siren song of unsustainable consumption and working to make changes in leadership that does not reflect their values. Growing up is a two-way street, and Strapped could have done a better job of looking both ways before crossing.

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**Gen Xers Return to College: Enrollment Strategies for a Maturing Population**

**BY JIM BLACK**

AACRAO. WASHINGTON, DC (2003). 184 PP.

Reviewed by Brian A. Vander Schee

“Nontraditional,” “advanced,” “mature.” No matter the terminology used to describe the cohort of students who attended high school years before and are now enrolling or reenrolling in college, Generation Xers (i.e., those born between 1965 and 1975) represent a growing student market for colleges and universities. It is not difficult to convince these individuals that a college education is necessary for a career change, professional advancement, or personal fulfillment. The challenge lies in meeting the unique expectations of Gen Xers, while at the same time meeting the needs of every student enrolled at the institution.

The text, edited by Jim Black of the University of North Carolina at Greensboro, takes a comprehensive look at the Generation X population segment and their pursuit of higher education. After reviewing the general characteristics of Gen Xers, the book moves to sections that focus on marketing and recruitment, advising and retention, and, finally, how to best serve this unique population. As a college professor and member of Generation X myself, I found the book related well to my professional experiences in the classroom with adult students and my personal experiences with fellow Gen Xers. However, the level of detail provided should resonate with any college professor or administrator, regardless of birth cohort.

The introductory chapters provide a general profile of Gen Xers. It is not just a snapshot of the adult student population but rather a dynamic view of student demographics, values and beliefs, family issues, concerns, and technological expectations. The challenge for colleges and universities is in developing programs and services that can ease the transition (back) to college, provide a meaningful educational experience, and improve student satisfaction. At the same time the statistical data presented in this section are a bit overwhelming, almost to the point of excess. I found that it was easy to get lost in the details and to lose sight of the purpose of the section: to provide an overall picture of the Generation X population as a basis for appropriate institutional response.

The section on marketing and recruitment is enlightening. Knowing that Gen Xers tend to return to college primarily to complete unfinished business, for career advancement or security, for a career change, or to pursue hopes and dreams is helpful. Black’s chapter on recruitment strategies and communications for the X Generation lists several exemplary institutional practices to ensure an affordable education for adult students. Given the financial concerns of Gen Xers, this chapter is even more of an asset when it comes to financial planning and program development in student accounts administration.

Kara Mohre’s chapter on marketing to Generation X was also very informative and practical. The quick tips for the “Xperts” marketing to Gen Xers included insights such as: illustrate convenience with flexible curricula and web-based courses; gear recruiting messages to focus on how an education can benefit the student now and in the future; make sure incentives are in place to market and attract this type of student; and, as necessities, offer free evening parking, a commuter deli, study lounges, and classes only for adults.

The specific focus on the Gen X population continues in the advising and retention section. An example is in Micah Martin’s chapter on the reentry transition, where the idea of implementing an orientation program that meets the unique needs of adult students is presented. The use of web technology is advocated as an effective means to reach students for whom it is inconvenient to come to campus. This virtual orientation
approach can allow institutions to communicate information individually to students in a time-sensitive manner.

The material in the chapter on persistence and graduation characteristics, however, is not specific to Gen Xers. This occurs in a few places in the text, where the information is germane to all students and is not specific to adult learners. Although the data and strategies presented may be sound, they are more or less good practice for any service operation and are therefore appropriate for all students regardless of their generational affiliation.

The concluding section on serving Gen Xers returns to addressing this population as unique, and provides Gen X-specific strategies. The chapter by Bob Roberts, on preparing staff to serve this population, outlines how to recruit and train service staff to best interact with and meet the needs of Gen X students. For example, he articulates the need for staff to work flexible office hours to provide access for students in the evening and on weekends. An additional point is made regarding staff knowledge of institutional policies, processes, and unique circumstances. The situations presented by adult students are often outside of the norm and therefore require staff to explain the rationale behind institutional decision making. An additional skill for staff to acquire is how to recognize gateway questions, where adult students ask one thing but really would like to know the answer to several other questions that they may not ask or may not know how to ask.

Black concludes the text with his chapter on mega trends and implications for enrollment managers. In his preface to the text, he states that “like other generations, Gen Xers are individuals first and part of a group second.” His point is that regardless of the generational data presented, it is imperative to treat all students as having uniquely personal characteristics, motivations, and aspirations. That said, it is still very useful to examine the demographic context of a student. Given the size of the Gen X student population, it seems fitting to have a text that provides such a backdrop and recommends appropriate enrollment strategies.

This text is a useful resource for college administrators as they conduct institutional planning for future enrollment. This is also true for enrollment managers charged with increasing enrollment, retention, and satisfaction of adult students. The book is well written and highlights the need to publish other works regarding student generations or other unique student population segments in higher education.

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### College Recruiters’ Quick Guide

**BY DEWEY HOLLEMAN**  
AACRAO, WASHINGTON, DC (2005) 48 PP.

**Reviewed by Brian A. Vander Schee**

The work in admissions looks like an attractive job. And those of us fortunate enough to have had the experience know that the long hours, travel, and high-stress environment can be an enriching endeavor. The skills learned can further a career in enrollment management or provide excellent preparation for advancement in a variety of other fields. Previously working as a student in the admissions office offers a distinct advantage in scaling the learning curve when it comes to starting a professional full-time position as an admissions counselor. The book *College Recruiters’ Quick Guide*, by Dewey Holleman, is designed for those who do not have the benefit of previous admissions experience and are therefore new to the admissions profession. The book fills the information gap sometimes created during the training of new staff when seasoned professionals skip over the basics and forget that all duties, processes, and terminology are not apparent to the rookie.

In several places, the book offers sound recommendations for any profession. An example is in the chapter “The Makings of a Great Admissions Counselor,” where the advice given is to “choose your mentors carefully as you place yourself in learning situations. Decide who among your colleagues manifests a model for professional success.” Another example is found in the concept of creating a perfect triangle of circumstance in following up: As a professional who does not know the answer to a question posed by a student, you can learn something new, fulfill the promise you made to find the answer, and strengthen your relationship with the student as you introduce a new topic during the follow-up session.

Practical guidance specific to work in admissions includes never reacting emotionally in public or in front of colleagues. The practical approach continues in the chapters introducing travel, college fairs, and working with high school guidance counselors, and these chapters are great for admissions representatives who will spend most of their time on the road. Common sense and sound advice from past experience are spread throughout. For example, smart travel includes becoming familiar with the area you are going to visit. This can be done by checking the local newspaper to read up on current events and to see if the schools you are visiting won their latest major sports contests.

Some information is provided as more of a theoretical rather than a practical ideal. For example, the list of items that are important to know before each high school visit is exhaustive and not realistic given the time constraints associated with preparing for travel. However, the list is a good starting point to generate ideas about where to begin. Keeping good notes on each high school visit will likely provide the best information for admissions counselors making future visits.
On the other hand, the list of questions frequently asked by students and parents is also exhaustive but essential. An ill-prepared admissions counselor can do more damage while meeting with prospective students than by not having a face-to-face interaction at all. The terminology section is very useful and user-friendly. It is particularly helpful in explaining financial aid acronyms such as COA (cost of attendance), EFC (expected family contribution), MPN (master promissory note), and SAP (satisfactory academic progress).

It is a quick guide and not an exhaustive handbook. Chapters of only one or two pages are common. Again, those who are new to the profession will benefit most, and the user-friendly approach is great for convincing a new admissions counselor, road runner, or student worker to sit down and read it for 30 minutes.

**ABOUT THE AUTHOR**

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**The Price of Admission: How America’s Ruling Class Buys Its Way Into Elite Colleges—And Who Gets Left Outside the Gates**

BY DANIEL GOLDEN

CROWN PUBLISHERS. 2006. 323 PP.

Reviewed By Paul Marthers

_The Price of Admission_, by Daniel Golden, the _Wall Street Journal_’s Pulitzer Prize-winning higher education reporter, is illuminating in that practically every page reveals a hidden practice of college admission, idealistic (see the chapter on California Institute of Technology’s meritocratic admission process), and depressing as it details how money, influence, fame, or alumni ties can clinch admission to places such as Brown, Duke, Harvard, and Notre Dame. Golden’s book is a grenade lobbed into a genteel parlor, blasting open a fissure in higher education’s credibility, showing repeatedly that the public needs to look not at what colleges say but at what they do behind closed doors. College admission may never be seen in the same way again, at least not by anyone who reads _The Price of Admission_ cover to cover.

College admission, in Golden’s estimation, has become America’s way of establishing something akin to the titled aristocracy of Europe. Holding a degree from one of the nation’s most prestigious colleges and universities signals status and membership in an exclusive club. The Ivy League degree, according to this thesis, approximate members of Great Britain’s House of Lords. Anyone ready to dismiss Golden’s view as exaggerated need only notice the emphasis placed on college pedigree in the wedding announcements in America’s newspaper of record, the _New York Times_, whose “Sunday Styles” pages describe marriages more like mergers: “Yale (BA)/Stanford (MBA) takes Princeton (BA)/Harvard (JD),” etc.

Not a few articles on _The Price of Admission_ speculated that the only college officials breathing relief when perusing the book were administrators whose schools were left out. Curiously, the institutions mentioned prominently in the book issued statements quibbling with some of Golden’s facts and figures but stopped short of denying its overall veracity. And not just the cynical have noted how quickly after the book appeared that Harvard, Princeton, and the University of Virginia (each of which takes center stage in _The Price of Admission_ for giving preferences for wealth, power, and upper crust sports) announced the end to their early admission programs and reaped all the attendant good publicity. The best damage control in relation to Golden’s book, it seems, is to change the subject, and quickly.

Golden is at his best when detailing the way Duke fundraiser and influence peddler extraordinare Joel Fleishman has connected scores of wealthy families and their children to Duke over the past 25 years, resulting in the nation’s most effective and no doubt grateful (for the admission edge bestowed) corps of parent fund volunteers in higher education—plus multiple board memberships and lucrative stock options for Fleishman. Golden gets it right on Duke. I know that, because I worked in the University’s development office from 1988 to 1993. Equally revealing is the peak inside Harvard’s “Z-list” of ultra-monekyed applicants who, if they are marginal prospects—and most are—get placed on the waiting list then admitted later on the condition that they wait a year to enroll. Again, I have firsthand experience with Harvard’s _Z-list_, having seen it reel in a few children of billionaires who were not among Andover’s finest students, during my stint there in the 1990s as a college counselor.

Whole chapters describe Brown University’s lust for the children of famous parents and Notre Dame’s partiality for alumni children. In both chapters Golden names names—many names. And given his prodigious insider’s command of details, I wondered frequently as I read the book, how did Golden get a hold of so many nuggets of the sort that colleges generally like to suppress? For example, Golden tells us that Lauren Bush (President Bush’s brother Neil’s daughter) was allowed to apply to Princeton several weeks after the application deadline passed, and, of course, her unremarkable application was expedited to the acceptance lane. Golden recounts how Duke’s director of admission happily made a house call to the Steven Spielberg residence to interview applicant Jessica Capshaw (Spielberg’s stepdaughter). Capshaw ultimately chose Brown. And Golden reveals that a scion of the billionaire Bass family was given a coveted slot on the Stanford football team as a nod to the University’s important relationship with one of its biggest donors.

The chapter on athletics makes a point often obscured in debates about the fairness of the college admission process. Who is really surprised that money, fame, and alumni ties...
can unlock entry to America’s most sought after private colleges, institutions that depend on donations from the loyal, the wealthy, and the connected to underwrite their academic missions? But how many people know about the strong link between high socioeconomic status and athletic recruiting at America’s most prestigious colleges?

Leaving aside basketball, football, ice hockey, track, and in most cases baseball—all sports that still draw blue collar athletes—Golden focuses instead on sports such as crew, horseback riding, fencing, golf, lacrosse, polo, sailing, skiing, soccer, squash, tennis, and water polo, and especially on the expansion in women’s teams to comply with Title IX requirements. He indicates that the athletes in such sports are primarily from prep schools or wealthy suburbs, students whose parents have the means to afford pay-to-play summer leagues where coaches from the likes of Amherst, Brown, Cornell, Haverford, Johns Hopkins, Princeton, Williams, and Yale recruit. Golden gives special attention to women’s crew teams, because they grew in exponential leaps and bounds after stricter enforcement of Title IX in the mid-1990s. Crew athletes, male or female, as Golden mentions, are nearly always white upper-middle-income or upper-income students.

Another chapter focuses on Asian Americans, who are the “new Jews” facing the we-have-enough-of-them-already admission quota. As with Jewish applicants to the Ivy League in the 1940s and the 1950s, Asian Americans are disproportionately represented in the applicant pools of the Ivy League, Berkeley, Stanford, UCLA, and other upper-tier colleges. Golden cites statistics and anecdotes to make the case that hidden quotas depress the Asian student percentage at America’s prestigious schools. Golden’s suspicion may have credence at the Ivy League, Stanford, and MIT, but he could have cited a large number of prestigious schools, such as Bowdoin, Grinnell, Middlebury, Oberlin, Reed, and Vanderbilt, where Asian American applicants still benefit from affirmative action in admission.

The one ray of idealistic light in The Price of Admission is the chapter devoted to Cal Tech, which is oblivious to alumni and development pressure to cut breaks to legacies and deep pockets. The Cal Tech Division III athletic program, similarly, emphasizes the student in student athlete, making no allowances for applicants of special interests to coaches. Cal Tech is a special case in higher education, a place rich enough not to need to let the fund-raising tail wag the institutional dog, a place where research grants garnered through the brilliance of faculty and students pays the bills, a place measured by Nobel Prizes and discoveries that push the boundaries of knowledge. Unlike the exclusive and aristocratic Ivy League, where lineage can make a huge difference, Cal Tech rewards one thing: gray matter. If any college admission process can ever be called pure, then Cal Tech is the model. The chapter on Cal Tech, supplemented by the example of Berea, the work college for poor students from Appalachia, could have included discussions of even more institutions (e.g., Olin College of Engineering) and admission processes (conservatories of music and art institutes) that focus simply on brains, talent, or both.

Golden ends with a chapter of recommendations for reform. Examples include abolishing athletic preferences for upper-crust sports such as crew and polo, establishing conflict of interest policies for admission officers, ending overt and covert discrimination against Asian American applicants, and taking steps to end legacy preferences and development interference. To neutralize the power of legacy and money, Golden suggests building a “firewall” between admission and development—noting that currently there is not even a “shallow trench.” Will colleges take heed? Probably not—perhaps especially because certain preferences that Golden assails are easy to defend, such as admission breaks given to children of faculty. By equating the thumb on the scale given to faculty children with the edge awarded to the wealthy and famous, Golden undermines the force of his critique. To paraphrase the “you had me at hello” line from the movie Jerry Maguire, Golden irrefutably has made his case by the end of discussions of preferences for wealth, fame, and legacies—stopping there would have been fine.

Still, Golden seems to understand that a prestigious college diploma is not simply a symbolic pedigree but an attempt to inoculate oneself against downward economic mobility. His message resonates because he taps into creeping economic insecurity and worries that the American dream is merely a myth, fears made all the more alarming by the evidence he offers that brains and talent no longer trump or even compete equally with the special privileges that accrue to the wealthy and connected.

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