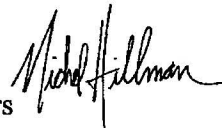


NORTH DAKOTA

UNIVERSITY SYSTEM

The Vital Link to a Brighter Future

TO: William Goetz, Chancellor

FROM: Michel Hillman, Vice Chancellor for Academic and Student Affairs 

DATE: June 9, 2010

SUBJECT: Enrollment Cap Background

In response to the Interim Higher Education Committee request for information on any studies or other background material used in support of the Board's position on enrollment caps in the 2003 Enrollment Management/Service Plan I reviewed the plan and other background materials used in the development of the plan. The list of reference provided in the plan does not indicate the sources used in drawing the plans conclusion listed on page 9:

“9. Since enrollment caps do not necessarily shift enrollments to under-enrolled campuses, the SBHE will not be establishing enrollment caps for individual institutions within the NDUS.”

Since Dennis Jones was used as a consultant by previous interim committees and by the Board in the development of the Enrollment Management/Service Plan he was contacted for additional background. Dennis indicated that his experience at the time came primarily from the early days of enrollment caps in Colorado. The caps did limit enrollment but they did not necessarily cause more students to enroll at under-enrolled campuses. He indicated that states have found enrollment admission criteria to be a better state enrollment management tool. States can manage enrollments by differential admissions criteria at different institutions or tiers of institutions. The differential criteria are usually based on such factors at ACT or SAT, or, a combination of admission test score and high school GPA. Enrollment cap strategies have involved both strict limits (that is, not more than a certain number of total students or new students) and funding limits (that is, institutions will receive state funding for no more than a certain number of students).

I also searched for other background information on enrollment caps. The attached article from USA Today indicates some of the management issues and challenges associated with caps. In North Dakota an enrollment cap policy might conflict with the SBHE plan goal to increase college access. This goal is based on the accountability measures and policy direction set in SB 2038 to increase postsecondary access and to maximize the usage of the NDUS in meeting the human capital needs of the state.

A student's choice of a campus is dependent on several factors such as program availability, geographic location, affordability, attractiveness of facilities etc., however; a study commissioned by UND in 2004

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provided additional references and concluded that students sort themselves based on academic ability related to the reputation of the campus:

“Analysis of the 2002 Cooperative Institutional Research Program (CIRP) survey of 1,471 UND freshman (74 percent of the freshman class) reveals that academic reputation is the most important factor influencing students’ decision to attend UND.”

Given the primary importance of this factor it is unlikely that students would attend a different type of institution if the institution they relate to most directly is not available to them because of enrollment caps.

Enrollment caps can certainly be used to limit enrollments at institutions, although caps should be consistent with broader state policy directions. Although the basis of the conclusion in the Board’s 2003 Enrollment Management/Service Plan was not referenced, other references support a conclusion that the most important factor affecting students college of choice is the alignment of the students’ abilities with the reputation of the college, and, college reputations vary by type of institution.



College applications rise, but budget cuts cap enrollment

Posted 1/14/2010 2:27 PM

By Terence Chea, The Associated Press

SAN FRANCISCO — College applicants are facing one of the toughest years ever to gain admission to the nation's public colleges and universities as schools grapple with deep budget cuts and record numbers of applications.

As cash-poor state governments slash budgets, colleges are capping or cutting enrollment despite a surge in applications from high school seniors, community college students and unemployed workers returning to school.

The increased competition means more students will be turned away, forced to attend pricier private institutions or shut out of college altogether.

Wilson Liang, a senior at San Francisco's Galileo Academy of Science and Technology, said he worries that enrollment cuts at the University of California will freeze him out of its flagship Berkeley campus.

"I know the competition is very high," said the 17-year-old Liang, who would be the first person in his family to attend college. "There are a lot of smart people out there."

Colleges that previously accepted all qualified students are becoming selective, while selective schools are becoming more so. Most community colleges have open-access policies, but demand for classes is so intense that many students can't get the courses they need.

"We're hearing a lot of panic," said Gerna Benz, a partner at California San Francisco Bay Area College Planning Specialists. Benz said business at his Oakland-based college counseling firm has tripled over the past year.

Benz is encouraging more families to consider private colleges, which may be more expensive but offer less crowded classes and the chance to graduate in four years, which is becoming a rarity at many public colleges.

Applications to private colleges are holding steady, while public universities around the country are seeing record demand as cost-conscious families look for good value, said Barmak Nassirian, associate executive director of the American Association of Collegiate Registrars and Admissions Officers.

Low-income, minority students could face the roughest road to admission because they often can't afford private colleges and don't have the resources or academic credentials to compete with students from wealthier families and better high schools, he said.

The enrollment caps could also threaten President Barack Obama's goal of making the U.S. the leader in college attainment by 2020 and undermine the nation's economic competitiveness, college officials say.

"We're reducing enrollment when we should be increasing it," said Scott Lay, president of the Community College League of California. Experts say states should increase access to college during a recession so that unemployed workers can train for new jobs.

The University of Florida, which has about 35,000 undergraduates, is seeking to reduce enrollment by 4,000 students by 2012, said spokeswoman Janine Sikes.

The chancellor of the Nevada System of Higher Education, which has 114,000 students, recently told its Board of Trustees it must consider capping enrollment for the first time.

"If you enroll someone and don't give that individual a reasonable path to a degree or certificate in a reasonable amount of time, what kind of access is that?" said Chancellor Dan Klaich.

Competition is particularly intense in California, where public universities are dealing with huge cuts in state support that have led to sharp tuition increases, faculty furloughs, course cutbacks and student protests. The state's 110 community colleges are struggling to accommodate a record 2.9 million students.

The 10-campus University of California reduced enrollment of California-resident freshmen by 6%, or about 2,300 students, and is expected to shrink enrollment further this year even as a record number of applicants applied for admission for the fall of 2010, said Nina Robinson, UC director of student policy.

"If we continue to enroll the same number of students as we have in the past, we risk affecting the quality of education for our current students," Robinson said.

Getting into the flagship Berkeley could be harder than ever for California residents because it plans to admit more nonresident undergraduates, who pay three times more in tuition.

California State University, the nation's largest public university system with 23 campuses and 450,000 students, is seeking to reduce enrollment by an unprecedented 40,000 students over two years. Before the state budget crisis, most CSU campuses accepted nearly all students who met the minimal qualifications.

By Dec. 1, CSU had already received a record 610,000 applications, a 28% increase, for fall 2010, which means large numbers of qualified students will be turned away, said Jim Blackburn, CSU director of enrollment management systems.

San Jose State University, which had 33,000 students in fall 2008, reduced enrollment by 3,000 last year and expects to cut an additional 2,500 students this year. The campus had to turn away 8,700 qualified applicants last year and expects to reject even more this year, said spokeswoman Pat Lopes Harris.

After five semesters of community college, Formekia Chinn had planned to transfer from Mission College in Santa Clara to San Jose State this month, but the CSU campus closed spring admissions. Her financial aid has run out, so she must find a job until she can start classes this fall — if she's accepted.

"It's very discouraging," said the 30-year-old single mom. "Who knows what's going to come up? I'm worried something else is going to go wrong."

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Assessing the Effects of Increased Admission Standards

Students with higher achievement scores and high school grade point averages are more likely to succeed in college as measured by their retention and graduation rates. Furthermore, an institution's ability to attract better prepared students results in a better academic reputation of the institution. The fact that better prepared students are naturally attracted to schools with strong reputations presents a quandary for schools looking to improve their reputation and student outcomes. Without better prepared students, an institution cannot improve its reputation, and without improving its reputation, it will not be able to attract better prepared students. This paper examines the potential effects of raising admission standards on enrollment and completions for the University of North Dakota.

by Cullen F. Goenner and Sean M. Snaith

Institutions of postsecondary education are increasingly operating in an environment in which they are expected to do more with less. This is particularly true for public institutions, which in 2002 faced the lowest state spending on higher education in the past decade. With fewer resources coming from the states, public institutions have sought and been granted greater flexibility to determine tuition, budgets, and academic programs. This flexibility has come at the cost of additional accountability. For example, in North Dakota, a bill was passed in 2001 allowing institutions that make up the North Dakota University System to determine the amount and use of tuition in exchange for greater accountability in reporting to the state board of higher education. Additionally, as a result of the Reauthorization of the Higher Education Act, Congress and President Bush have recently begun considering greater accountability for colleges, similar to K-12 education in the No Child Left Behind legislation. Institutions will thus be held accountable for educational outcomes including retention and graduation rates, time to degree, preparation for post-graduation employment, and costs.

Output is a function of the inputs used and the method of production. With respect to education, this implies that educational outcomes, such as completions, depend on both the number and quality of the student body (inputs) and the academic environment (method of production) created by the institution. One expects institutions with well prepared and highly motivated students to produce more as evidenced by higher graduation rates. Furthermore, one expects institutions devoting more resources to creating beneficial learning environments to achieve better outcomes. The challenge for institutions of higher education is there is only so much they can do to improve their academic environment when faced with fewer resources. The alternative is to increase the preparation of admitted students. The difficulty in choosing this

approach is that better prepared students tend to enroll in schools with better academic reputations, which in turn depends on the qualifications of the students they attract. Without additional resources to attract students by offering scholarships, universities are left with the difficult task of finding ways to improve outcomes without significantly increasing costs.

One technique to improve outcomes that universities have found appealing is to raise admissions standards. States including Louisiana, Nevada, North Dakota, and Oregon are either considering or have already implemented higher admissions standards. For example, at the University of North Dakota (UND), a doctoral research intensive institution with an enrollment of 13,000, the requirements for automatic admission starting with the Fall 2005 cohort will be a minimum high school grade point average (GPA) of 2.5 and an ACT score of at least 21, up from 2.25 and 17, respectively. The purpose of this change in policy is to move toward achieving the University's strategic plan, which in part seeks to optimize and stabilize enrollment to achieve the desired number and type of students appropriate to the University's mission, which is the discovery, development, preservation, and dissemination of knowledge. Similar to other research universities, UND does not serve to provide remedial work for students unprepared for college. Towards this end, UND has set the following goals:

- Raise the average ACT score of entering freshmen to 24 or higher.
- Achieve a retention rate of 80 percent after the first year.
- Attain a six-year graduation rate that exceeds 50 percent.

The purpose of this paper is to predict the impact of raising admissions standards on completion and retention rates as well as the potential impact on enrollment at the University of North Dakota.

First-Year Retention and Graduation Rates

The motivation behind increasing admissions standards at UND is two-fold: (1) to improve student outcomes by enrolling better prepared students; and (2) to create an environment that is conducive to academic achievement. Alexander Astin's (1991) Input-Environment-Output (IEO) model is a commonly used theoretical framework to understand first-year retention and graduation rates. These outcomes are influenced by the personal qualities of the student body (inputs) and the environment in which students interact. According to Astin's model, institutions with well prepared and motivated students will be more likely to see them persist until graduation. Astin (1991) categorizes student input measures that describe demographic characteristics, cognitive functioning, aspirations and expectations, self-ratings, values and attitudes, behavioral patterns, and educational background. Often these characteristics are measured by high school grade point averages, achievement scores, race, gender, and the age of the student. For further discussion see Astin 1993; Pascarella and Terenzini 1991; and Tinto 1987.

Examining retention and graduation rates of currently enrolled students at UND, one sees a significant relation to achievement scores and high school grade point average (GPA). Among first-time, full-time freshmen enrolled in 2001, 77 percent were still enrolled the following Fall at UND. Of those students meeting the current standards for automatic admission, 78 percent were retained as compared to only 62 percent among students not meeting these standards. For students currently meeting the new admission standards, the retention rate has grown to 82 percent.

The findings are similar when examining graduation rates. The five-year graduation rate for the 1996 Fall cohort was 42 percent. Of those automatically admitted under the current policy, 43 percent graduated in five years as compared to 20 percent for those that were not automatically admitted. The five-year graduation rate of students with ACT scores greater than or equal to 21 was 46 percent, as compared to only 35 percent for other students. These results clearly indicate that students with higher high school grade point averages and ACT scores have both higher retention and graduation rates.

Also relevant for the attainment of graduation is the method of production (environment) at each institution. Tinto (1987) finds that environments that support student integration into the academic community encourage student retention and subsequent graduation. The resources available and institutional type (size, control, mission, religious affiliation, etc.) are other factors that influence the environment and determine student outcomes. Accounting for both individual and institutional factors is essential to explaining retention and graduation rates.

Empirical analysis of first-year retention and graduation rates can be done at two levels: the individual student level and the institutional level. Individual level analyses (Astin 1997; Dey and Astin 1993; Kroc, Howard, and Hull, 1995; Murtaugh, Burns, and Schuster 1999; Smith, Edminster, and

Sullivan 2001) examine whether a student graduated based on her individual characteristics. For example, Astin (1997) predicts graduation while controlling for high school GPA, race, gender, and SAT scores. While these authors differ in their choice of other control variables used in their analysis, all use achievement scores (ACT/SAT) and high school GPA in their prediction models. The conclusion from these papers is that achievement scores and high school GPA have a positive effect on graduation rates. Analyses at the institutional level (Goenner and Snaith 2004a, 2004b; Mortenson 1997; Porter 2000) examine institutional graduation rates with respect to the characteristics of the institution and its student body. Goenner and Snaith (2004b) look at graduation rates across doctoral-granting institutions controlling for the characteristics of the student body (e.g., average age, SAT scores, gender, fraction of student body in the top ten percent of high school class) in addition to institutional characteristics (e.g., expenditures, fraction of faculty with Ph.D.s, tuition). Their findings showed that SAT scores and the fraction of the student body that graduated in the top ten percent of their high school class both have positive and statistically significant effects on four, five, and six-year graduation rates.

The analysis used in this study examines retention and graduation rates at the institutional level. The focus is on the institutional level of analysis in order to capture the effects that increased admissions standards will have on the preparation of the student body and on the overall environment created by the institution. The motivation behind this approach is that improving the preparation of the student body will have an interacting effect that will also change the characteristics of the institution. By examining other institutions with missions similar to UND's, the effects that higher standards will have on first-year retention and graduation rates can be predicted.

The sample used consists of 157 Doctoral I universities for which we have complete data. The independent variables used to analyze retention and graduation rates include average age, ACT score of the lowest 25th percentile, average high school GPA of the student body, expenditures per student, acceptance rate, percentage of out-of-state students, and whether the institution is public. A description of the data sources and summary statistics appears in Table 1 on the following page.

To evaluate the effects of increasing admissions standards at UND, we examine the effect of raising the ACT score of the lowest quartile of the student body by two points and the average high school GPA by 0.25. These values are consistent with the goals of this policy, which include raising the average ACT score to 24 and the high school GPA to 3.5. Using regression analysis we find that high school GPA and ACT scores have a positive and statistically significant effect on first-year retention rates. Increasing the average high school GPA of the student body by 0.25 increases the retention rate by 1.33 percent, while increasing the ACT score of the lowest 25th percentile by two points increases the retention rate by

Table 1: Description and Source of Variables used for Institutional Analysis

Variable	Description	Mean	Std. Dev.	Source
Grad6	Six-year graduation rate	56.42038	16.19003	USNWR ¹
Grad5	Five-year graduation rate	52.26846	17.8627	USNWR ¹
Grad4	Four-year graduation rate	33.62162	20.36384	USNWR ¹
HSGPA	Average High School GPA	3.405096	0.2757986	Petersons ³
LowACT	ACT score of lowest quartile	21.5414	3.070727	USNWR ¹
OutState	% Out of State	24.88535	21.8591	USNWR ¹
Age	Average Age of Full Time Undergraduates	21.20382	1.753161	USNWR ¹
AcptRt	Acceptance Rate	69.66879	18.58501	USNWR ¹
StExp	Per Student Expenditures	18279.83	12072.91	IPEDS ² F9596-B.DAT
Public	1 if Public School, 0 otherwise	0.6878981	0.4648339	IPEDS ² FA2000.DAT

¹ USNWR: U.S. News and World Report America's Best Colleges 2002 rankings (<http://www.usnews.com/usnews/edu/college/rankings/ranknatudoc.htm>)

² IPEDS: Integrated Postsecondary Education Data System (<http://nces.ed.gov/ipeds/>)

³ Petersons Undergraduate Guide to Four Year Colleges 2002

Table 2: Regression Results for Retention and Graduation Rates

	Retention	4-Year Grad	5-Year Grad	6-Year Grad
Constant	71.684 (8.60)	46.884 (2.02)	43.584 (2.16)	36.178 (2.14)
HSGPA	5.299 (2.77)	5.006 (0.95)	8.471 (1.85)	10.004 (2.58)
ACT	1.022 (4.47)	1.247 (2.02)	1.884 (3.50)	1.883 (4.05)
Out of State	-0.002 (-0.11)	0.158 (2.74)	0.069 (1.38)	0.061 (1.38)
Public	-0.710 (-0.76)	-8.713 (-3.35)	-2.592 (-1.14)	-0.666 (-0.35)
Age	-1.158 (-5.52)	-1.814 (-3.03)	-2.604 (-4.98)	-2.415 (-5.67)
Accept Rate	-0.091 (-3.79)	-0.293 (-4.61)	-0.134 (-2.42)	-0.103 (-2.12)
Student Exp.	0.0000349 (0.85)	0.000194 (1.77)	0.000195 (2.05)	0.00016 (1.92)
N	157	148	149	157
Adjusted R2	0.746	0.730	0.733	0.739

NOTE: t-statistics in parentheses.

another 2.04 percent. These results appear in the first column of Table 2. The predicted impact from the change in policy would be a 3.37 percent increase in the retention rate to 82 percent overall. Unlike most models based on individual student data, our model of retention rates with an adjusted R² of 0.75 explains a relatively high fraction of the variance in retention rates across institutions.

Using the same control variables listed above, we conducted regression analyses of four-year, five-year, and six-year graduation rates. The results of these models appear in columns 2, 3, and 4 of Table 2. The analysis indicates that ACT

scores have a positive and statistically significant effect for each time interval. High school GPA also has a positive effect, but is statistically significant only at the five and six-year time intervals. Examining six-year graduation rates, we see that increasing the high school GPA of the student body by 0.25 increases the graduation rate by 2.5 percent, while increasing the ACT of the lowest 25th percentile by two points increases the graduation rate by 3.76 percent. The predicted net effect of the policy change is therefore an increase in the six-year graduation rate of 6.26 percent. The effect on the five-year and four-year graduation rate is an increase in the graduation rate by 5.88 percent and 3.75 percent, respectively. From these results we can see a dramatic improvement in graduation rates with particular emphasis on graduation rates for longer horizons (five to six years).

Enrollment

An obvious concern over raising admissions standards is the effect the policy will have on enrollment. Of the students enrolled in the freshman cohort of 2002, 104 did not meet the current requirements for automatic admission. Under the new admissions standard there would be 556 students who

would not meet the standard for automatic admission. The change in policy, however, does not necessarily equate to lower enrollment. First, some students who do not meet the criteria for automatic admission will be admitted after careful screening of their qualifications. Secondly, high school students whose first choice is to attend UND will be forced to better prepare for achievement tests and/or consider attending a two-year institution that will provide students with the preparation needed to meet the academic expectations of UND. With respect to this latter point, UND is working to complete articulation agreements with all two-year institu-

tions in North Dakota as well as those in the Minneapolis and St. Paul metropolitan area of Minnesota to ease transfer to UND. Finally the effect that raising admissions standards will have on the ability to recruit better prepared students is discussed below.

The decision to apply to college can be seen as an investment by individuals in human capital (Becker 1993). Graduating from college offers benefits, such as higher wages or access to more prestigious occupations, but also imposes direct costs (tuition, books, and fees) and indirect costs (time spent studying or in class). Given the differences in preferences, preparation, motivation, and financial means, not all individuals will find it beneficial to invest in higher education. For instance, ill-prepared students will find the indirect cost of attending a university very high given the amount of time they may need to spend studying or in remedial classes relative to the rest of the student body. Once the decision to attend college has been made, the individual must still apply and be accepted. Of interest here is the effect that higher admission standards will have on applications to UND and students' choice to attend UND.

Guiding a student's choice to attend college is what Chapman (1981) describes as student characteristics (demographics, socio-economic status, and college preparation) as well as external influences (counseling, cost, and location of the institution). An important factor both in college choice and in assessing UND's change in admissions standards is the tendency of students to sort themselves by academic abilities (Braxton 1990; Chapman 1981; Heath 1993; Manski and Wise 1983; Nolfi 1979). This results in a student body that is relatively homogenous with respect to aptitude. Nolfi (1979) argues that "the attractiveness of educational alternatives first increases with the average quality of other students enrolled in them, peaks at a point where average ability is above the ability of the student in question, and then falls with further increases in average quality" (p.74). Additionally, empirical findings by Manski and Wise (1983) demonstrate that students tend to choose a college with an average SAT score within 100 points (approximately three points on ACT) of their own scores, when controlling for outside factors. At UND, 65 percent of students score within three ACT points of UND's average of 22, thus corroborating Manski and Wise's empirical findings.

Increasing admissions standards at UND will attract better prepared students, as measured by achievement scores and high school GPAs, thus increasing the academic reputation of UND. Academic reputation should also improve as average ACT scores, high school GPAs, retention, and graduation rates improve. Braxton (1990) cites several authors (Dahl 1982; Hearn 1984; Jackson 1978; Zemsky and Oedel 1983) who find that high-ability students are more likely to attend selective institutions and are more likely to select out-of-state schools (Dahl, 1982; Zemsky and Oedel, 1983). As UND becomes more dependent on attracting students from out-of-state, the ranking of UND in national college guides will become more important.

U.S. News & World Report's annual ranking of colleges provides a reference that many high school students and counselors use to guide college choice. In determining their rankings, *U.S. News* uses several measures that will be impacted by the change in UND policy. With respect to high school GPA and SAT/ACT scores, 5.25 percent of the final overall score used in the ranking is determined by the fraction of the student body in the top ten percent of their high school class, and 6 percent of the final overall score is determined by achievement scores. This policy change will also influence freshman retention and graduation rates, which are also included in the rankings. The six-year graduation rate accounts for 16 percent of the final overall score, while freshman retention rates account for 4 percent. While we cannot calculate the effect on the overall score, we can be reasonably confident that UND's academic reputation will increase over time as nearly one-third of the factors used by *U.S. News* in their ranking will be improved as a result of increasing admissions standards.

Analysis of the 2002 Cooperative Institutional Research Program (CIRP) survey of 1,471 UND freshman (74 percent of the freshman class) reveals that academic reputation is the most important factor influencing students' decision to attend UND. Of those surveyed, 52.5 percent responded that the reputation of the school was very important in their choice to attend, while 42.6 percent indicated it was somewhat important and 4.9 percent answered that it was not important. Rankings in national magazines at first glance seem less important to enrollment, as only 7.59 percent of the freshmen surveyed indicated that it was a very important influence in their decision to attend UND.

Further analysis of these data using ordered logit to control for region is reported in Table 3 and reveals that national rankings are significantly more important to students coming from outside North Dakota and Minnesota. Students from these two states are grouped together because the University of North Dakota, which is located in Grand Forks, lies on the border of North Dakota and Minnesota. In addition, Minnesota residents qualify for tuition that is only slightly higher than North Dakota residents. Among students enrolled at UND, 55 percent are from North Dakota and 25 percent from Minnesota. Among the students from North Dakota and Minnesota, only 30 percent found rankings important or very important, versus 47 percent of students from outside these two states. Similar analysis on academic reputation indicates that 58.4 percent of the students from outside the two-state region consider academic reputation very important, versus 51.7 percent of those from North Dakota and Minnesota.

Students from outside North Dakota and Minnesota are drawn to UND because of the academic quality of the institution. This is seen in the increased importance these students place on national rankings and the academic reputation as indicated in the CIRP survey. The university's reputation for social activities, the second largest factor drawing our current student body, is significantly less important to out of state

Table 3: Ordered Logit Probabilities of the Importance of Ranking, Academic Reputation, and Social Reputation in the Decision to Attend UND, When Controlling for Region

	Ranking (%)		Academic Reputation (%)		Social Reputation (%)	
	In State (ND,MN)	Out of State	In State (ND,MN)	Out of State	In State (ND,MN)	Out of State
Not Important	69.40	52.8	15.0	3.9	16.5	30.0
Somewhat Important	23.72	34.13	43.3	37.7	55.0	55.0
Very Important	6.88	13.01	51.7	58.4	28.0	15.0

students. Ordered logit analysis on the importance of social activities on the decision to attend UND when controlling for region reveals that 28 percent of students from North Dakota and Minnesota find social activities very important compared to 15 percent of students from outside these two states.

By increasing admissions standards UND should not only enhance its ability to attract students from outside the region, but also should attract better prepared students. Mayer-Foulkes (2002) empirical analysis finds that higher graduation rates and academic reputation contribute to attracting students with higher achievement scores in the future. Such findings bode well for UND's decision to raise admissions standards. Doing so represents the first step toward the goal of shifting the current distribution of ACT scores centered at 22 and high school GPAs to the right, while maintaining if not increasing current enrollment levels.

Conclusion

Increasing admissions standards will have two effects on UND. The first is that the student body will be better prepared for college, which will result in improved educational outcomes as measured by first year retention and graduation rates. Increasing the ACT score of the lowest 25th percentile by two points and increasing average high school GPA of the UND student body by a quarter point is predicted to increase first year retention by 3.4 percent. Four-year, five-year, and six-year graduation rates are also predicted to increase by 3.8, 5.9 and 6.3 percent respectively.

The second effect is on enrollment and student recruitment. By increasing admissions standards, a large number of currently admitted students will no longer be automatically admitted to the university. The change in policy does not necessarily equate to lower enrollment. A 2002 survey of UND freshmen indicates that academic reputation is the most important factor in choosing to attend UND. Increasing admissions standards will improve the reputation of UND nationally, by increasing the academic preparation of the student body as well as retention and graduation rates. Nearly one-third of the factors that *U.S. News* uses to rank colleges will be improved. This projected increase in ranking will put UND in a better position to recruit students from outside North Dakota and Minnesota, given that students who come to UND from outside this region indicate that academic characteristics such as reputation and national ranking are more important to them than they are to students from the region.

Increasing admissions standards, which results in higher average GPA and ACT scores, will also attract better prepared students as measured by these characteristics. Numerous studies have shown that students attend schools where the aptitude of the student body is similar to their own. Research also shows that students tend to choose schools with average ACT scores within three points of their own score when controlling for outside factors. This suggests that by increasing average achievement scores, UND will attract better prepared students. Furthermore, research shows that higher graduation rates and improved academic reputation have positive and statistically significant effects on attracting better quality students.

Changes in admissions standards will not have an overnight impact. It will take time to attract better prepared students and improve the academic reputation of UND. These characteristics are symbiotic. Better prepared students are needed to improve the reputation; but without an improved reputation, the University cannot attract better prepared students. Increasing admissions standards and reducing the number of students who drop out or do not persist to graduation is a step toward improving UND's academic reputation. Without such efforts, UND will be at a disadvantage both in the competition for students from outside the region and for the region's best and brightest students.

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