The Impact of an Increasingly Diverse Student Population on Retention and Graduation Rates

Background

It is generally recognized that an ethnically diverse student body enhances the education of every student on campus. A university is truly diverse if there are many different ethnic groups enrolled on campus and those groups have approximately the same percentage of students enrolled. U.S. News has created a diversity index based on the total proportion of minority students—not including international students—and the mix of racial and ethnic groups on campus. The categories used in the calculations are American Indians and Native Alaskans, Asian-Americans and Pacific Islanders, African-Americans who are non-Hispanic, Whites who are non-Hispanics and Hispanics. The formula produces a diversity index that ranges from 0.0 to 1.0. The closer the school’s number is to 1.0, the more diverse the student population.

In the 2012 Edition of US News released in September 2011, St. John’s received the 3rd highest diversity index among National Universities (.72 / 1.0), slightly behind Rutgers, the State U. of N.J. – Newark and the University of Houston. In the previous edition we were tied for 4th with three other institutions. Our continued very high ranking is a reflection not only of our steadily increasing percentage of diverse undergraduate students, but that in 2010, our three major ethnic groups had approximately the same percentage of students enrolled in each group: Blacks - 15%, Asians - 16% and Hispanics - 15%, with our White students accounting for 42%. This reflected a slight but steady increase from a combined percentage of 39% in 2000. In 2010 our Black, Asian and Hispanic freshmen accounted for 48% of our incoming class, compared to 40% in 2000.

Impact of Increasingly Diverse Student Population

While we celebrate our increasingly diverse population and the resulting enrollment, we are also cognizant of the ongoing disparities in retention and graduation rates by ethnicity nationally, particularly for African-American and Hispanic students. St. John’s is no exception. For example, comparative six-year graduation rates for the 2003 baccalaureate freshman cohort, are shown below.
While we are aware of these disparities, and recognize the need for initiatives to reduce these gaps, the purpose of this report is to try to ascertain to what extent, if any, the increasing diversity of the St. John’s student population has negatively impacted retention and graduation rates. As noted above, although we may choose to focus on African American and Hispanic students, any study of the impact of diversity needs to also look at all the ethnic groups.

In this study, we try to answer the following questions, by analyzing data for the past 10 or so years:

1. Does the changing student diversity at St. John’s University affect student retention?
2. When students’ academic preparation in high school is factored in, how is the retention of African Americans and Hispanic students as compared to white and Asian students?
3. How is the academic performance of minority students during their four undergraduate years?

Highlights of Findings

1. The changing / increasing student diversity at St. John’s has a negligible impact on overall student retention and graduation.
2. White and Asian students do have higher one-year retention rates than Black and Hispanic students, but when students’ academic preparation (in terms of high school GPA and SAT scores) is factored in, the gap is minimal.
3. The proportion of incoming students with low high school GPAs remained fairly constant for each ethnic group.
4. The academic performance of African Americans and Hispanic students is comparable to that of White and Asian students during their four undergraduate years.

5. The change in student ethnic diversity from 2001 to 2009 did not materially affect overall student retention rates. If the percentage of each ethnic group in 2009 had remained the same as in 2001, and if the one-year retention rate for each ethnic group in 2009 remained unchanged, the one-year retention of Cohort 2009 as a whole would be 78.2%, the same as the actual rate.

6. Similarly, the change in student ethnic diversity has not materially affected overall graduation rates. It is true that graduation rates of African American and Hispanic students are generally lower than for Asians and White students. However, while the graduation rates of White (66% - 2002, 61% - 2004) and Asian students (66%, 62%) declined for the last 3 cohorts, for the same period, the rates for African Americans (51%; 50%); and for Hispanics (55%; 56%) remained fairly constant.

**Detailed Findings**

1. **The change in student ethnic diversity and student retention**

   During the past ten years, as illustrated in Table 101, the proportions of ethnic students did fluctuate. The unknown category in ethnicity fluctuated most, ranging from as low as 5% to as high as 16% of the total student population. Some fluctuations in the known categories seemed to be related to the change in the unknown category, while other fluctuations didn’t seem to be.

   As compared to 2001, the proportion of the unknown category dropped by 7% in 2009 (12% vs. 5%); White students dropped by 6% (42% vs. 36%); African Americans went up by 5% (16% vs. 21%); Asian students were up by 4% (14% vs. 18%); and Hispanic students were up by 2% (14% vs. 16%). For the unknown category, there was a dramatic drop of 11% from 2007 (16%) to 2009 (5%). During the same period, African Americans went up by 5% (from 16% to 21%), and Hispanic students was up by 3% (from 13% to 16%).

   Table 132f presents the effect of the change in student ethnic diversity on retention. In this table, the actual data of Cohorts 2001 and 2009 were provided, and a model of Cohort 2009 was also presented. The model was under two assumptions: a) The percentage of each ethnic group in 2009 had remained the same as in 2001, and b) the one-year retention rate for each ethnic group in 2009 remained unchanged. The model indicates that the change in student ethnic diversity didn’t affect student retention.
It is a fact that as compared to 2001, the proportion of African Americans in 2009 increased by 5%, from 16% to 21%, and their retention was lower than the University average. It is also a fact that the proportion of White students decreased by 6%, from 42% to 36%, and their retention was higher than average. These two facts would have affected the retention of the whole university if other things had remained unchanged. Actually, two other facts balanced it out. First, the proportion of African Americans increased while the proportion of the unknown category decreased (12% in 2001 vs. 5% in 2009). The retention rates of African Americans and the Unknown were similar. Therefore, the shift from one to the other group didn’t affect the retention of the whole university. Second, the proportion of Asian students increased, from 14% in 2001 to 18% in 2009. The retention of Asian students was several points higher than White students, and that could make up for the percentage drop for White students.

2. Students’ academic preparation in high school and their retention

Without considering students’ academic preparation (in terms of high school GPA and SAT scores), the retention of African Americans and Hispanic students was lower than white and Asian students. Table 132b provides the aggregated one-year retention data of Cohorts 2005 to 2009 by ethnicity. The table indicates that there is a strong correlation between students’ academic preparation and retention. African Americans and Hispanic students had a lower high school GPA and SAT scores than white and Asian students, and their retention was also lower. (In order to present a clear relationship between academic preparation and retention, Pharmacy students were not included. (Table 132a includes Pharmacy students.)

Table 132d presents the one-year retention by high school GPA and ethnicity. Students were grouped into three high school GPA ranges: below 80, 80 – 89, and 90 – 100. The data indicate that within each high school GPA range, there was no clear trend that the retention of African Americans and Hispanic students was lower than that of white and Asian students even though the average SAT score of the former was much lower than that of the latter.

Table 132e provides the trend data of high school GPA distributions by ethnicity from 2002 to 2009. The data indicate that the proportions of students in each high school GPA range didn’t change much for any ethnic group when the change in the unknown category is taken into consideration. This, to a certain extent, explains the finding mentioned above: change in student ethnic diversity didn’t affect retention.
3. Students’ academic performance in the four undergraduate years by ethnicity

As discussed above, when high school GPA and SAT scores were taken into consideration, the first-year college GPA of African Americans and Hispanic students was similar to that of white and Asian students, which lead to a similar one-year retention rate. Then, what about their academic performance from the second to the fourth year? Table 132k provides such data.

Table 132k presents one-year retention and four-year graduation & continuation rates by the following college GPA ranges: 0.0 – 2.4, 2.5 – 2.9, and 3.0 – 4.0. The data indicate that the proportion of students in each college GPA range didn’t change much for any ethnic group from the first to the fourth year, and there was no clear trend that any ethnic group had a significant higher one-year and four-year retention & graduation rates. To put it another way, there is practically no difference among ethnic groups in the academic performance (in terms of college GPA) and retention & graduation rates.

4. Student retention and graduation rates by Ethnicity at Comparison Institutions

St. John’s data indicate that there is a very strong positive relationship between students’ academic preparation (in terms of high school GPA and SAT scores) and their college GPA, and in turn, high college GPA leads to high retention. These relationships may apply to most academic institutions. Table 201 provides one-year retention of the 20 institutions ranked highest by US News based on their diversity indexes. It is not surprising to find out that for such institutions as Stanford University and the Massachusetts Institute of Technology, both their one-year overall retention and six-year graduation rates are over 90%. This is clearly an indication that the academic preparation in high school for these students, of all ethnicities, would be very strong for such high ranking institutions. It is also worth noting that Rutgers University-Newark, which has the highest diversity index (.76), and a slightly lower SAT scores than St. John’s, has higher retention (86%) and graduation (63%) rates, suggesting the potential for us to improve our rates.

The relationship between academic preparation and retention and graduation rates can be also be seen in tables 202, 301 – 303. The show one-year retention and 4-, 5- and 6-year graduation rates respectively by ethnicity for a sample of institutions that like St. John’s, participate in the Consortium for Student Retention Data Exchange (CSRDE).
Appendix

Table 101. Enrollment, Retention, and Graduation Rates of First-time. Full-time Freshmen by Ethnicity- Fall 2000 – Fall 2009

Table 102. Enrollment, Retention and Graduation Rates of First-Time, Full-Time Freshmen by Ethnicity

Table 132a. STJ one-year retention by ethnicity, both Queens and Staten Island
  Cohorts 2005 to 2009 aggregated

Table 132b. STJ one-year retention by ethnicity, both Queens and Staten Island
  Cohorts 2005 to 2009 aggregated, not including Pharm students

Table 132c. STJ one-year retention by ethnicity and high school GPA
  Both Queens and Staten Island
  Cohorts 2005 to 2009 aggregated

Table 132d. STJ one-year retention by ethnicity and high school GPA
  Both Queens and Staten Island
  Cohorts 2005 to 2009 aggregated, not including Pharmacy students

Table 132e. Effect of the change in student ethnic diversity on retention

Table 132f. Distribution of high school GPA by student ethnicity, Cohorts 2002 - 2009

Table 132j. STJ student retention by ethnicity and college GPA, both Queens and Staten Island
  Cohorts 2005 & 2006 aggregated

Table 132k. STJ student retention by ethnicity and college GPA, both Queens and Staten Island
  Cohorts 2005 & 2006 aggregated, not including Pharmacy students

Table 201: US News Rankings - Diversity Indexes

Table 202: One-year student retention of CSRDE comparison institutions

Table 301. Four-year graduation rates: CSRDE Comparison institutions

Table 302. Five-year graduation rates: CSRDE Comparison institutions

Table 303. Six-year graduation rates: CSRDE Comparison institutions