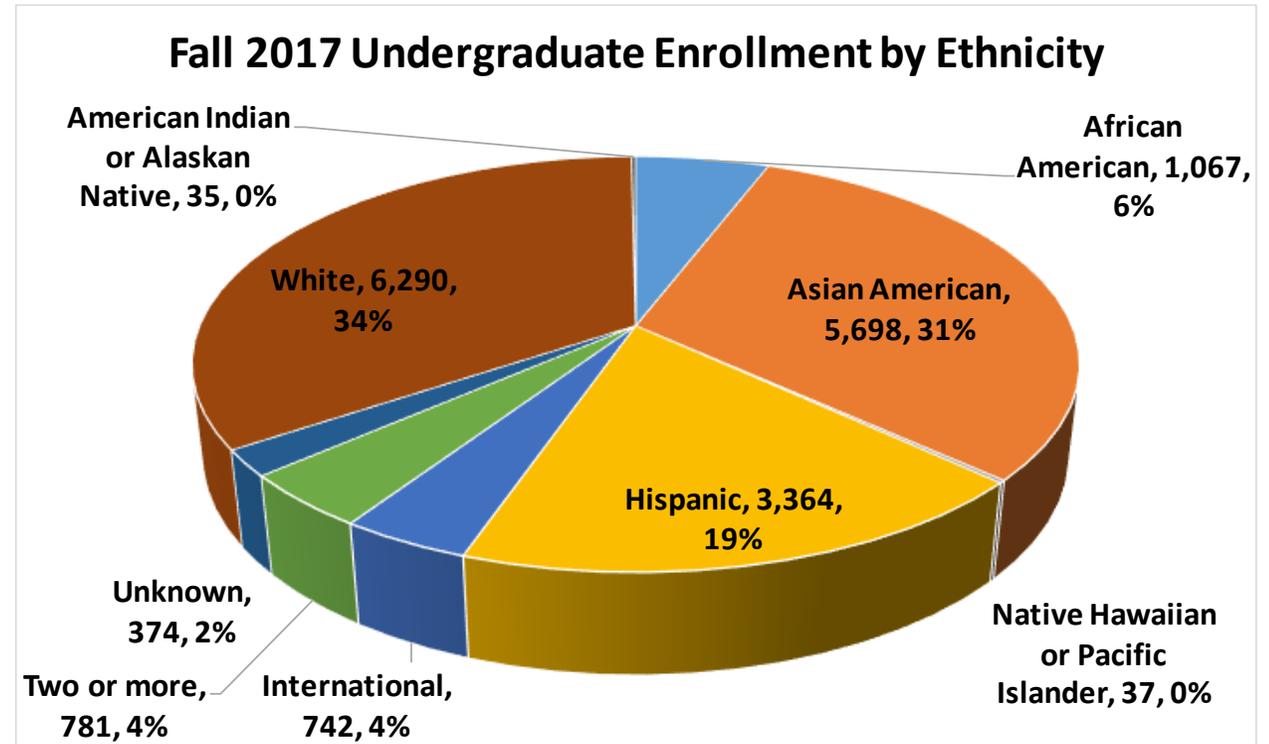


Minority Success at The University of Texas at Dallas: A Focus on African American and Hispanic Students

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- Founded in 1969 as a graduate-level research Institution
 - First undergraduates were admitted in 1990
 - **Fall 2017**
 - Total Enrollment: 27,642
 - Full-Time Enrollment: 21,677
 - **Fall 2017**
 - Undergraduate Enrollment: 18,388
 - Undergraduate Full-Time Enrollment: 15,294
 - Freshmen Retention Rate : 88%
 - Six-year Graduation Rate: 68% (*Fall 2012 cohort*)
 - Top FTIC Majors
- Computer Science; Biology; Neuroscience; Arts, Technology, and Emerging Communications; Mechanical Engineering; Biomedical Engineering; Computer Engineering; Biochemistry; Healthcare Studies.



Introduction

- U.S. Census data show, nationally, student diversification in higher education is rapidly growing.
- U.S. Census data also show that minority students are neither being retained nor graduating at the same pace as non-minorities.
- Other researchers have re-iterated the low graduation rates among minorities (e.g. Wilds and Wilson, 1998; Fry, 2004; Swail et al., 2005; Woodlief and Chavez, 2002).
- UTD four-year and six-year graduation data also reflect lower rates for minority students.
- It is critical that institutions of higher education find success strategies to address this persistent problem among minorities.

Purpose

- This study will examine the factors that cause minority students to remain at UTD for at least two years.
 - The focus is on Black and Hispanic students.
 - These are the largest at risk ethnic groups at UTD.
 - They also provide the greatest opportunity for UTD to improve graduation rates.
 - Asian and White students are also examined for comparison purposes.

5-Year Average of FTIC Students (2006-2010)

Ethnic Group	Avg. Number of Students	Six-Year Graduation Rate	Avg. % Retained after Year 1	Avg. % Retained After Year 1 and Graduated	Avg. % Retained after Year 2	Avg. % Retained After Year 2 and Graduated
All FTIC	1,196	66%	84%	78%	75%	86%
African American	61	55%	80%	69%	67%	80%
Hispanic	147	57%	77%	72%	68%	83%
Asian	327	75%	89%	82%	81%	88%
White	595	64%	82%	77%	72%	86%

Research Questions

- What are the factors that influence Black and Hispanic students to be successfully retained in their second and third years of study at The University of Texas at Dallas?
- How do the success factors for Black and Hispanic students compare with the factors associated with Asian and White students?

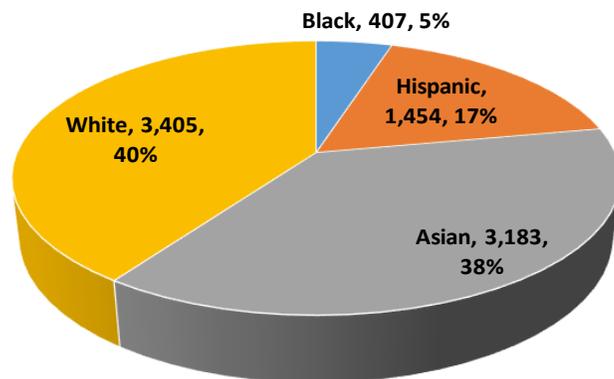
Selected Research

- The magnitude of students' formal and informal integration into social and academic aspects of the institution helps determine whether they would leave (Tinto, 1975, 1987, 1993).
- There are varying complexities associated with achieving a college degree, which include student motivation, student effort, personal and institutional features, pre-college academic accomplishment, economics and family background (Pascarella, Duby, and Iverson, 1983) .
- All institutions of higher education are ethnically diverse, albeit at varying degrees. Incorporating diversity in students' academic experiences serves as an important component for retention (Umbach and Kuh, 2006).
- Minority students who enroll in universities that have a White majority population frequently have lower persistence rates, lower academic achievement, and have difficulty with their psychosocial adjustment (Allen, Epps, and Haniff, 1991; Astin, 1982, Thomas, 1981).
 - Despite their aforementioned commonalities, minority students do not want to be stereotyped in their quest for a higher education. Such characterizations affect their cultural integration in the university and further impede their academic purpose (Seidman, 2005).
- The Black students who are successful are the ones who are able to smoothly navigate the social and cultural Black-White relationships that are more complex than what exists in high school (Allen, 1988; Pentages & Creedon, 1978; Peterson et al., 1978).

Overview of Data by Gender and Ethnicity

First-Year Data

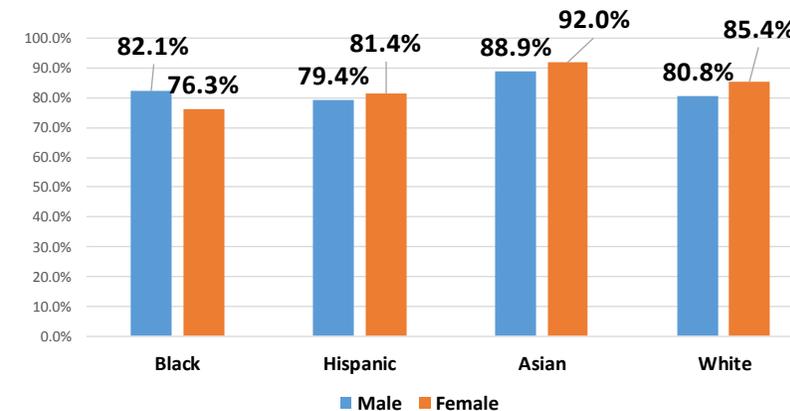
Fall 2010 -Fall 2014 FTIC by Ethnicity



10F-14F FTIC by Gender - Percent of Total

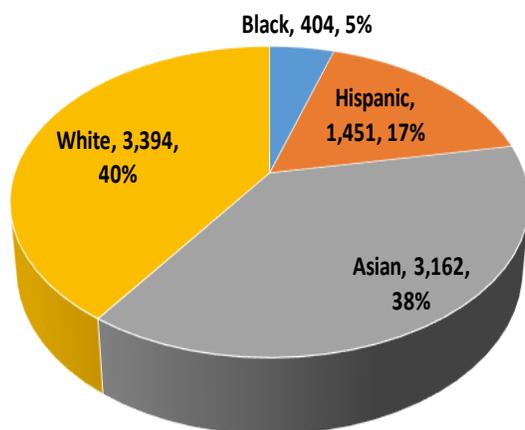
	Male	Female
Black	48.2%	51.8%
Hispanic	57.4%	42.6%
Asian	53.9%	46.1%
White	64.3%	35.7%

Second Year Retention Rate



Second-Year Data

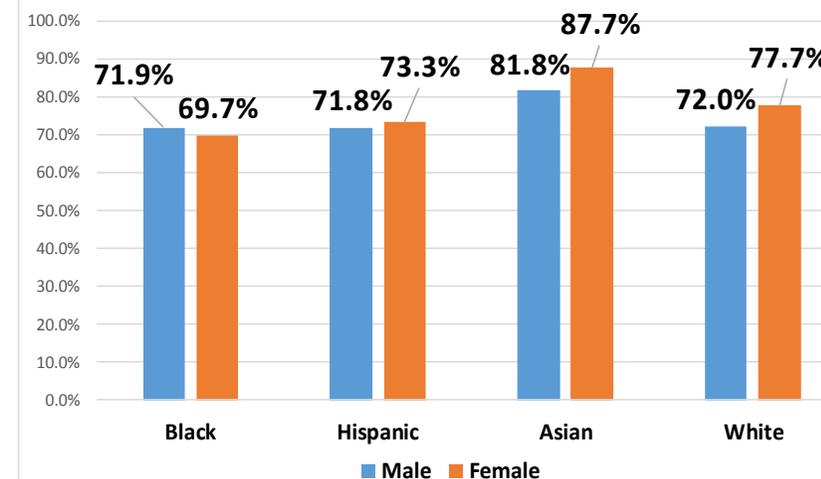
Fall 2010 -Fall 2014 FTIC by Ethnicity



10F-14F FTIC by Gender - Percent of Total

	Male	Female
Black	48.5%	51.5%
Hispanic	57.5%	42.5%
Asian	54.0%	46.0%
White	64.3%	35.7%

Third Year Retention Rate



- Eight logistic regressions are estimated to address the research questions.
 - The first four tests the predictive nature of the variables associated with FTIC students retained after the first year of study, by ethnicity.
 - The second set tests the predictive nature of the variables associated with FTIC students retained after the second year of study, by ethnicity.
- In addition to the regressions, descriptive statistics and cross tabulations were also examined.

Logistic Regression Model

Variables	Coding
Dependent Variables	
Retained after first year at UTD	Whether a student is enrolled in the subsequent Fall: No = 0, Yes = 1
Retained after second year at UTD	Whether a student is enrolled in the subsequent Fall: No = 0, Yes = 1
Independent Variables	
Class Rank	7 category variable representing high school class rank: Unknown = 0, 0% to 10% = 1, 11% to 20% = 2, 21% to 30% = 3, 31% to 40% = 4, 41% to 50% = 5, Greater than 50% = 6.
SAT/ACT Scores	Whether student meets assured criteria: No = 0, Yes = 1
AP/College credit	Whether a student obtained AP/college credit prior to enrolling at UTD: No = 0, Yes = 1.
Parental education	3 category variable representing parent highest level of education: Unknown = 0, Primary = 1, Secondary = 2, Higher = 3
Academic bridge	Whether the student participated in academic bridge program at UTD: No = 0, Yes = 1
Financial aid received	5 category variable representing the type of financial aid received: Did not receive financial aid = 0, AES = 1, Pell = 2, Other Grant/Scholarship = 3, Loan only = 4, Grant/Scholarship and Loan = 5.
Enrollment intensity	3 category variable representing students' enrollment intensity: Less than 12 SCH = 1, 12 SCH to 14 SCH = 2, Greater than 14 SCH = 3
Live in on-campus housing	Whether the student live in on-campus housing: No = 0, Yes = 1
Changed major	Whether the student changed major during the period examined: No = 0, Yes = 1.
Enrollment by top major	Whether the student enrolled in one of the majors with the highest enrollment: No = 0, Yes = 1.
First Term GPA and First Year GPA	4 category variable representing students' GPA after their first term and first year: Less than 2.5 = 1, 2.5 to 2.99 = 2, 3.0 to 3.49 = 3, 3.5 and greater = 4
Gender	Male = 0, Female = 1
Family income	6 category variable representing students' family income: Unknown = 0, Less than \$20,000 = 1, \$20,000 to \$39,999 = 2, \$40,000 to \$59,999 = 3, \$60,000 to \$79,999 = 4, \$80,000 or higher = 5.

Common Factors Influencing Student Success in the Second Year at UTD

- Four variables influences student success for all ethnic groups. The effect of the variables are all positive.
 - **Early College Credit** – Students who obtain college credit are better prepared for the academic rigor in college.
 - **Enrollment Intensity** – Students who enroll in more than 14SCH are more likely to be retained. Asian and White students are also more successful when the enroll in 12SCH to 14SCH.
 - **First Term GPA** – students with a first term GPA of 3.0 or greater are more likely to be successful. For Hispanic students success also increases for students with a 2.50 GPA.
 - **Major Change** - The students who change major prior to their second year are more likely to re-enroll.

- What about the students who change major in year two, three and four?
 - Students who change in any of the four years graduate at a higher rate than the ones who do not change major.
 - The graduation rate is highest for Black students who change in year three and four;.
 - It is highest for Hispanic students who change in years two and three.
 - For Asian and white students' graduation rate is highest for those who change in their first two years.

Unique Factors Influencing Student Success in Year Two

Black	Hispanic	Asian	White
<p>Gender. Black Female students are less likely to be retained in their second year of study than their male counterparts.</p>	<p>Parental Education. The students whose parents only have a high school education are less likely to achieve success.</p>	<p>Family Income. Students with a family income less than \$20,000 are less likely to be retained in their second year.</p>	<p>Family Income. Students with family income in the range of \$20,000 to \$39,999 are more likely to be successful.</p>
<p>High School Rank. High school rank has a negative influence in the 11% - 20% range. The effect is positive for the 31% to 40% range.</p>	<p>Financial Aid. The students who receive a combination of grants and loans are less likely to be successful in their second year.</p>		<p>High School Rank. High school rank in the range of 21% - 30% are less likely to be successful. The students in the range of 50% and greater are more likely to be retained.</p>
<p>Campus Housing. Black students who live on campus are twice as likely to be retained as the students who live off campus.</p>	<p>Academic Bridge. Students who participate in the academic bridge are more than three times as likely to be successful than the students who did not participate.</p>		<p>Financial Aid. The students who receive only the Pell grant are more likely to be retained. Having a mixture of grants and loans reduces the chances of being retained.</p>
			<p>Campus Housing. White students who live on campus are more likely to be successful.</p>

Common Factors Influencing Student Success in the Third Year at UTD

- Three variables influences student success for all ethnic groups. The effects of the variables continue to be positive.
 - **Early College Credit** – The impact of early college credit lasts. The variable continue to have a strong influence on student success .
 - **First Year GPA** – Similar to first term GPA, students with a GPA above 3.0 are more likely to be retained. Asian students with a First Year GPA of 2.50 to 2.99 are also more likely to be successful.
 - **Major Change** – Retention into the third year remains as strong when a student changes their major in the first two.



Unique Factors Influencing Student Success in Year Three

Black	Hispanic	Asian	White
Gender. Female students continue to be less likely to be retained in their third year of study.	High School Rank. Students in the range of 31% - 40% are less likely to be retained.	Parental Education. Students whose parents have a post-secondary education are more likely to be retained in the third year.	Family Income. Students with family income levels from \$60,000 to \$79,999 are less likely to be successful. Students with income levels of \$80,000 and above are more likely to be retained.
Parental Education. Students whose parents have a primary level of education are less likely to be successful. The parents with a post-secondary education are more likely to be retained.	Financial Aid. Students with a combination of grants and loans are less likely to be retained.	High School Rank. Students with a high school rank in the range of 11% - 20% are less likely to be retained.	Financial Aid. Students who take only loans, or a combination of grants and loans are less likely to be successful.
Enrollment Intensity. Students who enroll in more than 14 SCH are almost twice as likely to be retained.	Academic Bridge. The students who participate in the academic bridge program are almost twice as likely to be retained in the third year than those who did not.		Top Major. Students who enroll in a top major are more likely to be successful.

Recommendations

- Seek avenues to expand recruitment of students who successfully complete rigorous early college (AP, IB, Dual Credit) coursework.
- Endeavor to understand the success of the academic bridge program on Hispanic students and replicate it in other ethnic groups.
- Improve awareness of financial aid options.
- Promote student engagement for students living off-campus.
- Promote fulltime enrollment in the first two years.
- Assess the dynamics between major change and student success in the first two years.

Future Research

- UTD should attempt to understand the reason the academic bridge is more successful in Hispanic students.
- UTD needs to better understand the dynamics of FTIC students who change their major.
- It may be useful to understand the factors necessary to better integrate off campus students into the university environment.
- Additional research is required to understand the reason Black female students are less successful than male students.

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