ED 445 136	UD 033 731
AUTHOR	Lerner, Robert; Nagai, Althea K.
TITLE	Preferences in Minnesota Higher Education: Racial and Ethnic
	Preferences in Undergraduate Admissions at Four Minnesota
	Public University Campuses.
INSTITUTION	Center for Equal Opportunity, Washington, DC.
PUB DATE	1998-00-00
NOTE	24p.
PUB TYPE	Reports - Research (143)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Access to Education; *Admission (School); *Asian American
	Students; *Black Students; College Desegregation; Higher
	Education; *Hispanic American Students; Minority Groups;
	Racial Differences
IDENTIFIERS	*Preference Data; *University of Minnesota

ABSTRACT

This study examined the extent to which racial and ethnic preferences are used in the admissions policies of a cross-section of Minnesota's public universities. It submits admissions data supplied by these universities to a rigorous statistical analysis. Findings show that there is substantial evidence that the University of Minnesota at Twin Cities (UMTC) campuses and Duluth (UMD) discriminate against White applicants in favor of minority applicants in their admissions policies. At the four public universities in Minnesota covered by this study, White admittees on average have higher American College Testing Program (ACT) composite test scores than Blacks admitted to the same schools. White-Black differences in high school percentile ranks vary. At only one of the four campuses do Blacks have a higher class percentile rank than do Whites. The relative odds of admission at UMTC and UMD show a strong degree of preference given to Blacks over Whites. Relative odds ratios show preference for Hispanics over Whites at UMTC. At three of the campuses, White students had higher ACTs than did Asian students, and relative odds ratios show that Asians receive preferences in admissions relative to Whites at UMD and UMTC. The evidence indicates that Minnesota schools would not become segregated in the absence of preferences. All of these universities, if they used a colorblind process, would have many nonwhite admittees. (Contains 23 figures.) (SLD)



Preferences in Minnesota Higher Education

Racial and Ethnic Preferences in Undergraduate Admissions at Four Minnesota Public University Campuses

By Robert Lerner, Ph.D. and Althea K. Nagai, Ph.D.



Prepared for the Center for Equal Opportunity



Linda Chavez, President

815 15th Street, NW, Suite 928 Washington, DC 20005 Phone: 202-639-0803 Fax: 202-639-0827 http://www.ceousa.org

BEST COPY AVAILABLE

U.S. DEPARTMENT OF EDUCATION Office of Educational Research and Improvement EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to

improve reproduction quality.

 Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Jennifer Collins Equal Opportunity TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

١.

ED 445 136

Acknowledgments

We would like to thank the Minnesota Association of Scholars, its Board of Directors, and its executive director, William F. Meehan III, for their financial and other aid in obtaining the data used in this report.



Executive Summary

- There is substantial evidence that the University of Minnesota campuses at Twin Cities and Duluth discriminate against white applicants and in favor of minority applicants in their admissions policies.
- At the four public universities in Minnesota covered by this study, white admittees on average have higher ACT composite test scores than blacks admitted to the same schools. The gap in ACTs ranges from one point at the University of Minnesota at Crookston (UMC) to seven points at the University of Minnesota at Morris (UMM). The University of Minnesota at Duluth (UMD) has a gap of four points, and the University of Minnesota at Twin Cities (UMTC) has a five-point gap. White-black differences in high-school percentile rank vary. At three of the four campuses, whites have a higher class percentile rank than do their black counterparts. At UMM, however, blacks have a higher class percentile rank than do whites.
- The relative odds of admission at UMTC and at UMD show a strong degree of preference given to blacks over whites (3.04 to 1 at UMTC and 4.09 to 1 at UMD). At UMM, however, the relative odds of admission show no evidence of preference given for either whites or blacks. UMC admitted all applicants.
- At three of the Minnesota public universities, white admittees have higher average ACTs than do their Hispanic counterparts. The differences are two points at UMD and UMTC and three points at UMM. At UMC, Hispanics have a somewhat higher average score than do their white counterparts. At all universities, white admittees have a higher average high-school percentile rank than do their Hispanic counterparts. The differences range from 1 point at UMM to 17.5 points at UMC. The difference at UMTC is 4.5 points.
- Relative odds ratios show preference for Hispanics over whites at UMTC (4.96 to 1).
- At three of the campuses, white students have higher ACTs than do their Asian counterparts. The differences range from three points at UMTC to one point at UMM. At UMC, there is no ACT difference between white and Asian enrollees. At two campuses, UMC and UMTC, whites average higher than do Asians in class rank (25.00 and 1.00, respectively). At UMM there is no difference and, at UMD, Asians have a higher rank than do their white counterparts.
- Relative odds ratios show that, at UMD and UMTC, Asians receive preferences in admissions relative to whites (4.52 to 1 and 6.56 to 1, respectively).
- Frequently white applicants are rejected even though they have higher ACT scores, high-school class rank, or both than the average minority accepted, especially at UMTC and UMD.
- The white six-year graduation rate is higher than the black average at all universities studied. The Hispanic six-year graduation rate is higher than the white rate at UMM, but lower otherwise. The Asian rate is equal to the white rate at UMM and UMTC, but lower at UMD and UMC.
- Except at UMC, black enrollees are more likely to be required to take remedial courses than their white counterparts. Three times as many blacks as whites are required to take remedial courses at UMTC while six times as many blacks as whites are required to take remedial courses at UMM. Except at UMC, a larger proportion of Hispanics than of whites is required to take remedial courses. A smaller proportion of Asians than whites is required to take remedial courses at UMD. More Asians are required to take such courses at UMTC.
- Minnesota schools would not become segregated in the absence of preferences. All universities, if they used a colorblind process, would have many nonwhite admittees.



Introduction

For nearly 30 years, racial and ethnic preferences have played a key role in how admissions officers at the nation's public and private colleges and universities have chosen their schools' undergraduate classes. This system operates by establishing different standards of admission for individuals based on their racial or ethnic background, with some students held to a higher standard and others admitted based on a lower standard. Earlier in this century, some colleges and universities denied admissions to Jews, blacks, women, and members of other groups even when their grades, test scores, and other measures of academic achievement surpassed those of white males who were offered an opportunity to enroll. The passage of new civil rights legislation in the 1960s made this kind of discrimination illegal.

Since then, however, many colleges and universities created programs meant to boost the enrollment of students whose backgrounds previously had excluded them from pursuing a higher education—especially blacks and, to a lesser extent, Hispanics—by granting them preferences during the admissions process. These policies, when their existence was made public, became immediately controversial, and they remain so today. Defenders of racial and ethnic preferences claim that these policies are not discriminatory and help administrators choose between equally or almost equally qualified students, giving a slight edge to applicants who likely have faced discrimination or have come from disadvantaged backgrounds. Critics of preferences say that these policies are no better than the discriminatory ones they replaced and that the advantages they confer upon certain applicants are much greater than supporters are willing to admit.

Public colleges and universities have seen their ability to use racial and ethnic preferences increasingly restricted in the last several years. Court decisions have generally been hostile to such preferences. California's Proposition 209 (also known as the California Civil Rights Initiative) forbids discrimination against or granting special treatment to any applicant on the bases of race, ethnicity, or sex in the public programs of the country's most populous state. A similar ballot initiative in Washington State was approved by a large majority of the voters in 1998. Grassroots activists elsewhere are trying to place similar proposals on their own state ballots, and lawmakers—both in Congress and in state capitals—have drafted legislation modeled on the new California and Washington laws.

This study examines the extent to which racial and ethnic preferences are used in the admissions policies of a cross-section of Minnesota's public universities. It submits admissions data supplied by these universities to a rigorous statistical analysis.

This report is the latest in a series published by the Center for Equal Opportunity (CEO), a Washington, D.C.- based, public policy research organization. Earlier CEO studies have focused on the public colleges and universities of Colorado, Michigan, North Carolina, Virginia, Washington, the U.S. Military Academy and the U.S. Naval Academy, as well as the branches of the University of California at Berkeley, Irvine, and San Diego. Previous reports have shown that blacks and Hispanics receive a substantial degree of preference in the undergraduate admissions process at many schools studied.



EO

Methodology

The four universities examined in this study—the University of Minnesota, Twin Cities (UMTC); the University of Minnesota, Duluth (UMD); the University of Minnesota, Morris (UMM); and the University of Minnesota, Crookston (UMC)—are the four-year campuses of the University of Minnesota. Figure 1 provides a list of schools, followed by their ranking in *Barron's Profiles of American Colleges*.

romes of Four Fubic Universities in Minnesota					
School	Abbreviation	Ranking in Barron's			
University of Minnesota, Crookston	UMC	Non-Competitive			
University of Minnesota, Duluth	UMD	Competitive			
University of Minnesota, Morris	UMM	Very Competitive			
University of Minnesota, Twin Cities	UMTC	Very Competitive			

Figure 1 Profiles of Four Public Universitites in Minnesota

We received data on individual applicants, admittees, rejectees, and enrollees regarding their racial or ethnic group membership, ACT composite scores, and high-school class rank. We also received data on whether or not individual enrollees were required to take remedial courses. ACTs are the college entrance exam taken by the overwhelming majority of applicants to these four universities. Scores vary on a scale ranging between 1 and 36, where 36 is the highest possible score and 1 is the lowest possible score. Class rank is the percentile rank in the high-school graduating class. It varies on a scale between 1 and 100, where 100 is the highest possible rank and 1 is the lowest.

We omit from our data analyses international students, as well as students whose race or ethnicity is listed as other, missing, or unknown. We also omit Native Americans because of their small numbers in this context. Lastly, we omit cases with missing academic data.

We received admissions data for both 1997 and 1998. In our report, we combined these data into a single analysis for each UM university so as to give us a sufficient number of cases for statistical analysis of racial and ethnic differences in admission and enrollment. When the data are analyzed for each year separately, there are no differences in the pattern of results obtained.

We do not report group means for test scores or class ranks. Using group means places greater weight on extreme values than is warranted. A few unusually high or low scores can have a substantial effect on the value of the mean. Standard deviations, which are based on squared deviations from the mean, are even less useful for describing the spread of cases for asymmetrical, badly skewed distributions. This is because standard deviations reflect the mathematical square of these extreme values.

The median, however, and related statistics such as percentiles are far less affected by the values of extreme cases. The median represents the middle of the distribution, so that 50 percent of all students have greater scores, and 50 percent have lower scores.

We also report scores at the 25th and 75th percentile, again to deal with the problem of extreme cases. While the median represents the middle of the distribution, the 25th and 75th percentile scores taken together represent the actual spread of scores. For example, a 25th percentile score of 10 on the ACT means that 25 percent of the scores were below 10, while 75 percent of the scores were above it. A 75th percentile score of 35 means that 75 percent of the scores were below 35, while 25 percent were above it.



Racial and Ethnic Differences in Admittee Qualifications

Applicants, Admissions, and Enrollments

Figure 2 shows the admission rates at the schools studied. At the three competitive campuses, blacks are admitted at a lower rate than are members of other groups. Asians are admitted at higher rates than are members of other groups at UMD and UMTC, and whites are admitted at the highest rate at UMM.

R	acial and r.thn	ic Differences in	Aunission Rat	
	Blacks	Hispanics	Asians	Whites
UMC	100.0%	100.0%	100.0%	100.0%
UMD	84.2%	86.2%	91.7%	88.2%
UMM	88.7%	92.3%	91.9%	98.0%
UMTC	80.6%	89.9%	93.5%	84.0%

Figure 2 Racial and Ethnic Differences in Admission Rates

In the next sections, we examine three pairs of differences in qualifications: white-black, white-Hispanic, and white-Asian. Treating each pair of comparisons separately makes it easier to see whether substantial differences in racial and ethnic differences exist, for which groups they are greatest, and for which groups they are the least.

Differences between Whites and Blacks

White admittees on average have somewhat better test scores than do blacks at the three competitive campuses. The largest gap in test scores between whites and blacks is at UMM, followed by UMTC. At three schools, blacks also were admitted with lower high-school class rank on average compared to whites. At UMM, however, black admittees on average had a higher median class rank than did their white counterparts. (See Figure 3.)

	ACT C	Composite Scores	
	Whites	Blacks	Differences in Median Scores
имс	19.00	18.00	1.00
UMD	23.00	19.00	4.00
ИММ	25.00	18.00	7.00
UMTC	25.00	20.00	5.00
	High-S	chool Class Rank	
	Whites	Blacks	Differences in Median Scores
ИМС	50.00	29.00	21.00
UMD	74.00	71.50	2.50
UMM	88.00	91.00	-3.00
UMTC	82.00	73.00	9.00

Figure 3 White-Black Admittee Differences. ACT Composite Scores



Differences between Whites and Hispanics

At the three competitive campuses, white admittees on average have slightly better test scores and highschool class rank than do Hispanic admittees. The largest gap in test scores there between whites and Hispanics is at UMM (3.00 points), while the white-Hispanic gap in high-school class rank is greatest at UMD (7.50 points), followed by UMTC (4.50 points). At UMC, however, Hispanics have higher average ACT scores than do their white counterparts. (See Figure 4.)

	ACT	Composite Scores	
	Whites	Hispanics	Differences in Median Scores
UMC	19.00	20.50	-1.50
UMD	23.00	21.00	2.00
UMM	25.00	22.00	3.00
UMTC	25.00	23.00	2.00
	High-S	School Class Rank	
	Whites	Hispanics	Differences in Median Scores
UMC	50.00	32.50	17.50
UMD	74.00	66.50	7.50
UMM	88.00	87.00	1.00
UMTC	82.00	77.50	4.50

Figure 4 White-Hispanic Admittee Differences

Differences between Whites and Asians

White admittees on average also have better test scores than Asian admittees do, except at UMC, where the averages are equal. The largest gap in test scores is at UMTC (3.00 points). In contrast, Asian admittees at UMD have, on average, a higher median class rank (4.00 points) than do their white counterparts. There is no white-Asian difference in class rank at UMM, while the white median class rank is slightly higher at UMTC and much higher at UMC. (See Figure 5.)

		Figure 5	
	White-Asian	Admittee Differences	
	ACTO	Composite Scores	
	Whites	Asians	Differences in Median Scores
UMC	19.00	19.00	0.00
UMD	23.00	21.00	2.00
UMM	25.00	24.00	1.00
UMTC	25.00	22.00	3.00
	High-S	chool Class Rank	
	Whites	Asians	Differences in Median Scores
UMC	50.00	25.00	25.00
UMD	74.00	78.00	-4.00
UMM	88.00	88.00	0.00
UMTC	82.00	81.00	1.00

Relative Odds of Admission

Admitting students based on racial and ethnic preferences results in schools accepting minorities with lower test scores and grades than white students at the same schools. This creates a situation in which enrollees who were admitted under a scheme of preferences actually have the same qualifications as whites at a less competitive school. Admissions officers essentially reach down into the applicant pool and pull up certain students. This practice generally results in at least some whites with better credentials than minority



enrollees being rejected from the same schools, despite their superior qualifications. Moreover, there often will be a positive relationship between the quality of a school and the white-minority gap in qualifications.

One way to show this gap is to combine all the data reported above. A useful way to do this is to develop models that predict the probability of admission at each school for members of the different racial and ethnic groups, holding constant their qualifications. This can be done by computing prediction equations for the admissions decision by race and ethnicity and including test scores and high-school class rank as statistical control variables.

The technique we employ for this purpose is logistic regression. Computing logistic regression equations allows us to derive the odds of admission for each minority group relative to that of whites.¹ The odds ratio is somewhat like a correlation coefficient, except instead of varying from 1 to -1, it varies between infinity and zero. An odds ratio of 1 means that the odds of admissions for the two groups are equal. It is equivalent to a correlation of zero. An odds ratio greater than 1 means that the odds of members of one group being admitted are greater than those for members of the other group being admitted. An odds ratio of less than 1 is the reverse. The former is similar to a positive correlation, the latter similar to a negative correlation.

We report the computed odds ratios by racial and ethnic group membership, controlling for test scores and grades (see Figure 6).

	Black to	Hispanic	Asian to
	White	to White	White
UMC	n.a.	n.a.	n.a.
UMD	4.09*	2.40	4.52*
UMM	1.01	0.17	5.79
UMTC	3.04*	4.96*	6.56*

Figure 6 Relative Odds of Admission

If we statistically control for ACT scores and high-school class rank, we find racial and ethnic preferences against whites at UMTC. Racial preferences in favor of a particular ethnic group over whites is expressed as an odds-ratio that is statistically significant. Asian applicants have the best odds against whites, controlling for test scores and high-school rank. An Asian applicant, controlling for ACT scores and class rank, has more than six times the odds of a white applicant being admitted to UMTC. Hispanic applicants, controlling for test scores and high-school rank, have almost five times the odds of admission as white applicants. Black applicants have an odds of admission relative to whites of roughly three to one, controlling for test scores and class rank.

Racial preferences also favor blacks and Asians over whites in admissions at UMD. Statistically controlling for test scores and high-school class rank, black applicants have a statistically significant odds of being admitted over whites, at a rate of roughly four to one. The Asian-to-white odds ratio is also statistically significant and is about four-and-a-half to one. The relative odds of admission for Hispanics is 2.40 to 1, but falls slightly short of the conventional p<.05 level of statistical significance.

For a much more complete discussion of odds ratios, see David E. Lilienfeld and Paul D. Stolley, *Foundations of Epidemiology*, Third Edition (New York: Oxford University Press, 1994), pp. 226-228; 316-317. Regarding logistic regression, see Alan Agresti, *Introduction to Categorical Data Analysis* (New York: John Wiley and Sons, 1996).



¹ Odds ratios are commonly found in academic studies where the relative odds of something occurring is reported for one group and compared to another. For example, regarding children taking aspirin, when the media report that children taking aspirin were 42.7 times more likely to get Reyes syndrome compared to those that didn't, they are reporting the relative odds—or what epidemiologists also call relative risk of getting Reyes syndrome among children who take aspirin versus those who do not.

At UMM, the relative odds of admissions comparing blacks to whites, Hispanics to whites, and Asians to whites are not statistically significant.

How Preferences Affect Graduation Rates

If students gain admission to colleges and universities for reasons other than their academic preparation, it is likely that they will face greater burdens in school than their peers who have met a higher academic standard of admission. They may in fact not earn their degrees. So it makes sense that racial and ethnic preferences will have a negative effect on the graduation rates of students who supposedly benefit from them.

Blacks, Hispanics, and Asians at UMD graduate at roughly half the rate of whites. At UMTC, blacks and Hispanics graduate at a much lower rate than Asians and whites, whose graduation rates are roughly the same.

Notably, a larger proportion of Hispanics compared to whites graduate from UMM (60.0 percent versus 49.2 percent), while the Asian and white rates are about equal. Blacks graduate at slightly more than half the white rate.

Interestingly, the graduation rates for Asians do not fall below that for whites at two schools (UMM and UMTC) (see Figure 7).

Six-Year Graduation Rates (1992 cohort)				
	Blacks	Hispanics	Asians	Whites
UMC	0.0%	0.0%	0.0%	20.7%
UMD	20.0%	18.2%	25.0%	42.6%
UMM	26.7%	60.0%	50.0%	49.2%
UMTC	33.8%	37.0%	48.6%	49.1%

Figure 7 Six-Year Graduation Bates (1992 cobort

Racial and Ethnic Differences Regarding Remedial Courses

Students admitted for reasons other than academic preparation will more likely be forced to enroll in remedial coursework than those admitted on academic ability alone. Racial and ethnic preferences would, in other words, have a negative effect on students' capacity to handle the coursework compared to those admitted without the benefit of preferences.

Remediation at UM universities is based on high-school preparation. Any enrollee lacking in one or more high-school academic units is required to take at least one remedial course.²

At all three competitive schools, fewer than one in ten whites take remedial courses. At UMM and UMTC, blacks and Hispanics are enrolled in remedial courses at a much higher rate than whites.

² Official requirements are: 4 academic units of English, 3 academic units of mathematics (1 each of elementary algebra, geometry, and intermediate algebra), 3 units of science (1 each of biological and physical science), 2 units of foreign language, and 2 units of social studies (including 1 course in American history).



Proportionately more Asians at UMTC also take remedial courses than do whites.³ (See Figure 8.)

	Percentage Taking Remedial Courses					
	Blacks	Hispanics	Asians	Whites		
UMC	0.0%	0.0%	0.0%	1.3%		
UMD	7.1%	11.4%	3.6%	6.6%		
UMM	32.1%	22.2%	0.0%	5.3%		
UMTC	28.3%	17.3%	12.5%	8.4%		

Figure 8 Percentage Taking Remedial Courses

Minority Admittees vs. White Rejectees

The use of racial and ethnic preferences will lead to less qualified black, Hispanic, and Asian students being admitted at the expense of more qualified white students.

We computed the number of white rejectees with ACT composite scores and high-school class ranks equal to or greater than the black, Hispanic, and Asian admittee median at each school (see Figure 9).

White Rejectees. White Rejectees, ACT White Rejectees, Scores and Class Rank > High-School Rank > ACT Scores > Average Average Black Admittee Black Admittee Average Black Admittee UMC n.a. n.a. n.a. 2 UMD 441 3 0 0 UMM 31 35 61 UMTC 2.116 Hispanic Admittees Compared to White Rejectees White Rejectees, ACT White Rejectees, White Rejectees, Scores and Class Rank > High-School Rank > ACT Scores > Average Average Hispanic Admittee Hispanic Admittee Average Hispanic Admittee UMC n.a. n.a. n.a. 1 UMD 257 3 0 0 UMM 13 12 21 UMTC 1.194 Asian Admittees Compared to White Rejectees White Rejectees, ACT White Rejectees, White Rejectees, Scores and Class Rank > High-School Rank > ACT Scores > Average Average Asian Admittee Average Asian Admittee Asian Admittee UMC n.a. n.a. n.a. UMD 257 1 1 0 0 UMM 6 7 13 UMTC 1,531

Figure 9 Black Admittees Compared to White Rejectees

Although it is not shown here, the probability of taking remedial courses decreases as ACT scores increase. Similarly, controlling

ERIC Full Text Provided by ERIC At all three competitive campuses, many whites were rejected despite having ACT scores better than the median score of black admittees. At UMD, 441 whites had better test scores; at UMM, 31 whites had better scores; and at UMTC, 2,116 whites had better scores. If we compare high-school class rank, however, we find no white rejected by UMM and only three by UMD with better class rank. This results in only 2 whites at UMD and no whites at UMM rejected with better test scores *and* high school class rank. At UMTC, however, 61 whites were rejected despite having higher high-school rank, and there were 35 whites rejected despite having both better test scores and high-school rank than the median for black admittees at UMTC.

Many whites applying to the three competitive schools were also rejected with ACT scores greater than the median scores for Hispanic admittees. Very few rejectees from the three schools, however, had highschool class ranks higher than those of the average Hispanic admittee. At UMD, while 257 whites had ACT scores greater than the median score of Hispanic admittees, only 3 were ranked higher in their high-school class, resulting in only 1 white at UMD with test scores and high-school class rank greater than the median for Hispanic admittees. 13 whites were rejected by UMM despite having higher ACT scores, but no white rejectees had higher class rank compared to the median class rank of Hispanic admittees at UMM. Thus, UMM rejected no whites with higher test scores and class rank compared to the median score and highschool rank for Hispanic admittees. At UMTC, 1,194 white rejectees had higher ACT scores, and 21 white rejectees had higher class rank, compared to the median score and class rank of Hispanic admittees. This resulted in 12 whites being rejected by UMTC despite having better ACT scores and class ranks compared to the average Hispanic admittee.

At the three schools, many white rejectees had ACT scores higher than the median score of Asian admittees, but far fewer whites rejected had higher class ranks. At UMD, 257 whites were rejected despite having higher test scores. In contrast, only 1 was rejected with better class rank. This student had both a better ACT score and class rank compared to the average Asian admittee at UMD. At UMM, 6 white rejectees had higher scores, but none had higher class rank, compared to the average Asian admittee. Accordingly, no white rejectees had both better ACT scores and class rank compared to the average Asian admittee. At UMTC, 1,531 whites were rejected despite having ACT scores greater than the median ACT score for Asian admittees. 13 whites were rejected despite having higher class rank compared to the median class rank of Asian admittees. This resulted in 7 white rejectees at UMTC with ACT scores and high-school class rank greater than the median score and median class rank of Asian admittees.

What Colorblind Admissions Would Mean for Minnesota

If racial and ethnic preferences ended in Minnesota's public universities, would minorities be locked out of opportunities to pursue a higher education? After enacting California's Proposition 209 into law, the experience at the University of California provides plausible answers. Recent information indicates that, while the most competitive universities had smaller black enrollments than in the past, other universities actually gained black students or at least did not lose them.⁴ Despite critics' fears, all of the University of California's schools, including Berkeley and UCLA, have enrolled (not merely admitted) many blacks.

for ACT scores dramatically reduces the racial and ethnic differences in remediation rates.

⁴ Los Angeles Times, "Fewer Blacks and Latinos Planning to Enroll at UC: Declines are sharpest at top campuses, while numbers increase at Riverside, Irvine, and Santa Cruz," May 21, 1998.



To address the question for Minnesota's universities, we first compared the median ACTs and median class ranks of black, Hispanic, and Asian admittees at the four schools in this report with the 25th percentile of whites admitted at the same schools (see Figures 10, 11, and 12, respectively). If the median score equaled or surpassed the white 25th percentile in these categories, we assumed that the applicant could gain admission to the particular school in question without racial preferences.

While the average black admittee at each of the four schools has an ACT score greater than that of white admittees at the 25th percentile only at UMC, such is not the case when considering class rank. Based on median class rank, black admittees at UMM could gain admission at all four campuses; those at UMTC and UMD would be admitted to three of the four.

The average Hispanic admittee at UMC has an ACT score greater than that of white admittees at the 25th percentile at UMC, while the average Hispanic admittee at UMD has an ACT score greater than that of white admittees at the 25th percentile at UMC and UMD. The average Hispanic admittee at UMM has an ACT score greater than that of white admittees at the 25th percentile at UMC, uMD, and UMM, while the average Hispanic admittee at UMC has an ACT score greater than that of white admittees at the 25th percentile at UMC has an ACT score greater than that of white admittees at the 25th percentile at UMC, uMD, and UMM, while the average Hispanic admittee at UMTC has an ACT score greater than that of white admittees at the 25th percentile at all other schools.

When comparing the median class rank of Hispanic admittees versus that of white admittees at the 25th percentile, we find the median class rank of Hispanic admittees at UMC is greater than that of white admittees at the 25th percentile at UMC. At UMD, the median class rank of Hispanic admittees is greater than that of white admittees at the 25th percentile at UMC and UMD, while the median class rank of Hispanic admittees at UMC and UMD, while the median class rank of Hispanic admittees at UMM and UMTC is greater than that of white admittees at the 25th percentile at all four schools. Thus, based on median class rank, Hispanic admittees at UMM and UMTC could gain admission at all four campuses, while those at UMD would be admitted to two.

H	Figure 1	0		
Could the Average B				
Compa	red to 25th	Percentile	White Act	nittees at:
Median ACT Composite Score of Black Admittee from:	UMC	UMD	UMM	IIMTC
UMC	x			
UMD	x			
UMM	x			
UMTC	x			
Median Class Rank of Black Admittee from:	UMC	UMD	UMM	UTM
UMC	x			
UMD	x	x		x
	x	x	x	x
UMIC	x	x		x

Figure 11				
Could the Average Hispanic Admittees Go Elsewhere?				

Could the Average His Compa	red to 25th			
Median ACT Composite Score of Hispanic Admittee from:	UMC	UMD	NMM	UMTC
	x			
	x	x		
	X	x	X	
UMTC	x	x	x	x
Median Class Rank of Hispanic Admittee from:	UMC	UMD	UMM	UMTC
UMC	x			
UMD	x	x		
UMM	x	x	X	x
UMTC	x	x	x	x

X= Hispanic Admittee > White Admittees

13

X= Black Admittee > White Admittee



For Asian admittees, their ACT median score at UMC is greater than that of the 25th percentile of white admittees at UMC. The median score of Asian admittees at UMD is greater than that of whites at the 25th percentile at UMC and UMD. The median ACT score of Asian admittees at UMM is greater than that of whites at the 25th percentile at all four schools, while that of Asian admittees at UMTC is greater than the scores of whites at the 25th percentile at three of the four schools.

We find the median class rank of Asian admittees at UMC to be lower than that of whites at the 25th percentile at all four schools. In contrast, the median class rank of Asian admittees at UMD, UMM, and UMTC is higher than the class rank of whites at the 25th percentile at all four schools. Based on median class rank, Asian admittees at UMD, UMM, and UMTC could gain admission to all four schools.

The same calculations can be made for the top quartile of black, Hispanic, and Asian admittees at each school. Figures 13, 14, and 15 show black, Hispanic, and Asian admittees at the 75th percentile for the four campuses, compared to the white scores at the 25th percentile.

The top quartile of black admittees at UMTC would be able to attend all four campuses, whether measured by ACTs or by class rank. The top quartile of black admittees at UMD would be able to attend three of four campuses (UMC, UMD, and UMM) based on ACT scores, while those at UMM and UMC would be able to attend UMC and UMD. The top quartile would be eligible at even more schools if we use class rank. The top quartile of blacks at UMD, UMM, and UMTC has higher class ranks than the 25th percentile of white admittees at all four campuses. They would be admitted at any of these campuses even without racial preferences.

Regarding Hispanic admittees, it seems likely that the top quartile at UMD, UMM, and UMTC would also be able to attend all four campuses. The ACT score and high-school class rank of the top quartile of Hispanic admittees at UMD, UMM, and UMTC are greater than the scores and high-school class rank of

I	Figure 1	2		
Could the Average A	sian Adn	nittees G	o Elsewh	ere?
Compa	red io 25th	Percentile	White Act	nittees at:
Median ACT Composite Score of Asian Admittee from:	UMC	DMD	MMU	UMTC
UMC	x			
UMD	x	x		
UMM	x	x	x	x
UMTC	_ x _	x	x	
Median Class Rank of Asian Admittee from:	UMC	DMD	WWN	UMTC
UMC				
UMD	x	x	x	x
UMM	x	x	x	x
UMTC X= Asian Admittee > White /	x	x	x	x

X= Asian Admittee > White Admittees

]	Figure 1	3		
Could the Top Bla				
Compa	red to 25th	Percentile	White Adm	nittees at:
Top Quartile ACT Composite Score of Black Admittee from:	UMC	DMD	MMM	UMTC
UMC	x	x		
UMD	x_	x	x	
UMM	x	x		
UMTC	x	x	x	x
Top Quartile Class Rank of Black Admittee from:	UMC	UMD	NMM	UMTC
UMC	x			
UMD	x	x	x	<u>x</u>
100/	x	x	x	x
UMM	<u>^</u>			

..... 17



white admittees at the 25th percentile at all four campuses.

The top quartile of Asian admittees would generally have the same options they do now. The top quartile of Asian admittees, based on ACT scores, at UMD, UMM, and UMTC have scores greater than the scores of white admittees at the 25th percentile at all four schools. Concerning high-school class rank, the top quartile of Asian admittees at UMC had a higher class rank compared to white admittees at the 25th percentile at UMC and UMD. The top quartile of Asian admittees at UMD, uMM, and UMTC were ranked higher in their high-school class compared to white admittees at the 25th percentile at all four schools.

It is therefore clear that, based on the test scores and high-school class rank for all three minority groups, the University of Minnesota system would not become segregated in the absence of racial and ethnic preferences. Every campus would have minority admittees. If admissions were based on high-school class rank, the average and top minority admittees would have access to most and, in some cases, all four campuses.

Could the Top Hispa	unic Adm	ittees Go	Elsewh	ere?
Compa	red to 25th	Percentile	White Adı	nittees at:
Top Quartile ACT Composite Score of Hispanic Admittee from:	UMC	DMD	MMU	UMTC
	x	_		
UMD	x	x	x	x
UMM	x	x	x	x
	x	x	x	x
Top Quartile Class Rank of Hispanic Admittee from:	UMC	UMD	МММ	UMTC
UMC	x			
	x	x	x	x
UMM	x	x	x	x
UMTC X= Hispanic Admittee > Whi	X	x	x	x

Figure 14

Could the Top Asian Admittees Go Elsewhere?				
Compa	red to 25th	Percentile	e White Adı	nittees at:
Top Quartile ACT Composite Score of Asian Admittee from:	UMC	UMD	МММ	UMTC
UMC	x			
UMD	x	x	x	x
UMM	x	x	x	x
UMTC	x	x	x _	x
Top Quartile Class Rank of Asian Admittee from:	UMC	UMD	MMM	UMTC .
UMC	x	x		
UMD	x	x	x	x
UMM	x	x	x	x
UMTC	x	x	x	x

Figure 15 Could the Top Asian Admittees Go Elsewhere

X= Asian Admittee > White Admittees



Individual School Analysis⁴

University of Minnesota, Crookston

Applicants, Admittees, and Enrollees

In 1997 and 1998, 740 individuals applied for admission to the University of Minnesota, Crookston (UMC). Of these, all were admitted and 487 enrolled. The overwhelming proportion of applicants, admittees, and enrollees was white.

UMC applicants

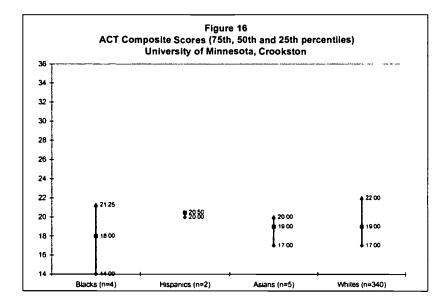
- 1.6 percent black
- 0.7 percent Hispanic
- 0.9 percent Asian
- 96.8 percent white

UMC admittees

- 1.6 percent black
- 0.7 percent Hispanic
- 0.9 percent Asian
- 96.8 percent white

UMC admission rates

- 100 percent of black applicants
- 100 percent of Hispanic applicants
- 100 percent of Asian applicants
- 100 percent of white applicants UMC enrollees
- 1.6 percent black
- 0.6 percent Hispanic
- 0.2 percent Asian
- 97.5 percent white



Differences in ACT Scores

Figure 16⁶ shows the range of ACT composite scores by racial and ethnic group, for 1997 and 1998 combined. The ACT composite scores vary little between the groups.

Foreign students and students listed as "Missing," "Other," "Native American," and "Unknown" were dropped from the analyses. ⁶ The ACT is scored on a scale of 1 to 36, but because no scores in the UM system fell below 14, we have used a grid in the relevant charts that begins at that score.

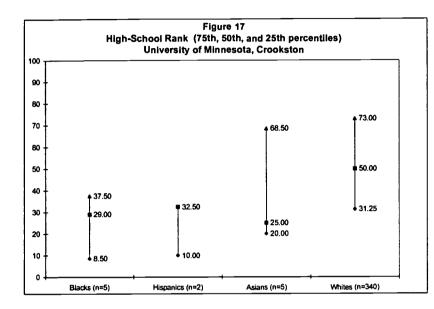




⁵ Data were combined for two years, 1997 and 1998, to provide us enough cases to perform statistical analyses for all UM schools.

Differences in High-School Rank

Differences in high-school rank among racial and ethnic groups are much larger. The average white admittee at Crookston graduated at the 50th percentile of his or her high school class. In contrast, the average black admittee graduated at the 29th percentile, while the average Asian admittee graduated at the 25th percentile (see Figure 17).



Proportion Needing Remedial Education During First Year of College

- 0 percent of black enrollees
- 0 percent of Hispanic enrollees
- 0 percent of Asian enrollees
- 1.3 percent of white enrollees

Rejectees vs. Admittees

UMC rejected no applicants in 1997 and 1998.

Graduation Rates, 1992 Cohort

- 0 percent of blacks
- 0 percent of Hispanics
- 0 percent of Asians
- 20.7 percent of whites

UMC has extremely low graduation rates for whites and, as of 1999, *no* members of the other groups had graduated.⁷

University of Minnesota, Duluth

Applicants, Admittees, and Enrollees

In 1997 and 1998, 7,691 individuals applied for admission to the University of Minnesota, Duluth (UMD). Of these, 6,745 were admitted and 3,427 enrolled. The overwhelming proportion of applicants, admittees, and enrollees was white.

- UMD applicants
- 0.9 percent black
- 1.2 percent Hispanic
- 3.0 percent Asian

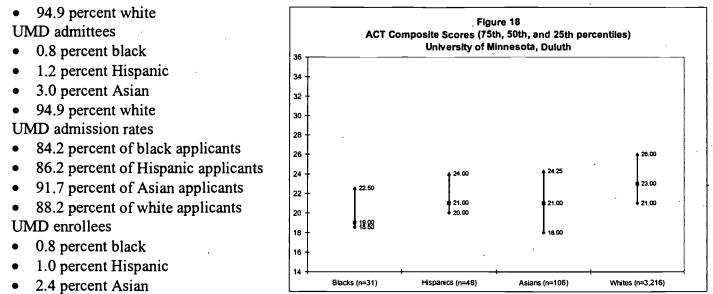
⁷ It is possible, however, that some students in the 1992 cohort transferred to other four-year institutions and graduated there.

 $\frac{16}{C=O}$

17



J



• 95.7 percent white

Differences in ACT Scores

Figure 18 shows the range of ACT composite scores by racial and ethnic group, for 1997 and 1998 combined, at UMD. The largest differences are between white and black admittees. The median ACT composite score for black admittees is lower than the ACT composite score for white admittees at the 25th percentile. That is, more than half the black admittees have ACT composite scores lower than 75 percent of all white admittees. Similarly, the average Hispanic and Asian admittee has ACT composite scores that are only equal to that of whites at the 25th percentile.

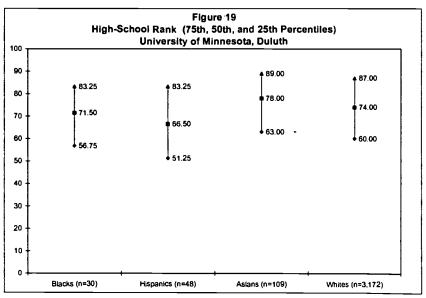
Differences in High-School Rank

Unlike test scores, racial and ethnic groups do not differ in terms of class rank. More than 75 percent of admittees from every racial and ethnic group rank in the top half of their high-school classes. The average white, Asian, and black admittee class ranks

are roughly the same, although the Asian class rank is higher than the other groups. The average Hispanic admittee ranks somewhat lower than other groups. (See Figure 19.)

Proportion Needing Remedial Education During First Year of College

- 7.1 percent of black enrollees
- 11.4 percent of Hispanic enrollees
- 3.6 percent of Asian enrollees
- 6.6 percent of white enrollees





The overwhelming majority of all admittees for every group did not enroll in remedial classes. More than one in ten Hispanic enrollees was required to enroll in remedial education classes, however, and proportionately fewer Asian enrollees were required to take these classes. The percentage of black and white remedial-class enrollees is about the same.

Rejectees vs. Admittees

UMD rejected 23 Asians, 13 blacks, 13 Hispanics, and 897 whites. Of these 946 rejectees, 7 Asians, 4 Hispanic, and 441 white rejectees had ACT composite scores above the median score of black admittees, and 3 white rejectees were higher in class rank compared to the average black admittee. Only 2 white rejectees had higher class rankings *and* higher ACT composite scores compared to the average black admittee.

Similarly, 3 Asians, no blacks, and 257 whites were rejected by UMD despite having ACT composite scores above the median score of Hispanic admittees. In contrast, there were only 3 whites, and no Asians or blacks, with higher high-school class rank compared to the median high-school class rank of Hispanic admittees. This results in one white, but no blacks or Asians, rejected by UMD despite higher test scores and class rank.

Compared to the median ACT score of Asian admittees at UMD, 3 Hispanic, no black, and 257 white rejectees had higher scores. One white rejectee, but no black or Hispanic rejectee, had a higher class rank compared to the median high-school class rank of Asian admittees. One white, but no blacks and no Hispanics, was rejected by UMD with higher test scores *and* high-school rank compared to the average Asian admittee.

Graduation Rates, 1992 Cohort

- 20.0 percent of blacks
- 18.2 percent of Hispanics
- 25.0 percent of Asians
- 42.6 percent of whites

Whites at UMD graduate at a much higher rate compared to all other groups. This is consistent with their higher test scores compared to the other groups.

University of Minnesota, Morris

Applicants, Admittees, and Enrollees

In 1997 and 1998, 1,921 individuals applied for admission to the University of Minnesota, Morris (UMM). Of these, 1,854 were admitted and 974 enrolled. The overwhelming proportion of applicants, admittees, and enrollees was white.

UMM applicants

- 8.3 percent black
- 1.5 percent Hispanic
- 3.9 percent Asian
- 86.4 percent white
- UMM admittees
- 7.8 percent black
- 1.4 percent Hispanic
- 3.9 percent Asian

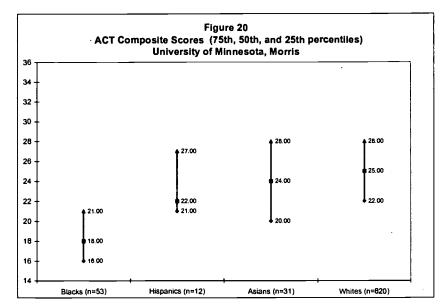


• 86.9 percent white

- UMM admission rates
- 88.7 percent of black applicants
- 92.3 percent of Hispanic applicants
- 91.9 percent of Asian applicants
- 98.0 percent of white applicants UMM enrollees
- 5.7 percent black
- 0.9 percent Hispanic
- 2.8 percent Asian
- 90.6 percent white

Differences in ACT Scores

Figure 20 shows the range of ACT composite scores by racial and ethnic group at UMM. White scores are on average higher than those of other groups, while ACT composite scores for black admittees are generally lower than those for other groups. The ACT composite score for black admittees at



the 75th percentile is roughly the same as that of Hispanic, Asian, and white admittees at the 25th percentile. This means that 75 percent of black admittees have lower test scores compared to roughly 75 percent of Asian, Hispanic, and white admittees.

Differences in High-School Rank

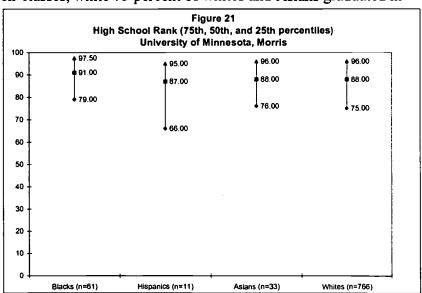
Racial and ethnic groups differ less regarding high-school rank. The average black admittee was ranked slightly higher in high school compared to whites, Hispanics, and Asians. Roughly 75 percent of black admittees graduated in the top 20 percent of their classes, while 75 percent of whites and Asians graduated in

19

the top 25 percent. The average Hispanic admittee graduated at roughly the same rank as the average white and Asian admittee, but the Hispanic admittee at the 25th percentile graduated at the 66th percentile, while those at the bottom quartile of white, Asian, and black admittees graduated with a class rank that is much higher. (See Figure 21.)

Proportion Needing Remedial Education During First Year of College

- 32.1 percent of black enrollees
- 22.2 percent of Hispanic enrollees
- 0 percent of Asian enrollees
- 5.3 percent of white enrollees



20



BEST COPY AVAILABLE

There are significant differences in the proportion of each racial and ethnic group enrolled in remedial classes. No Asian enrollees and only 5.3 percent of whites were in remedial classes. This is in contrast to 32.1 percent of black and 22.2 percent of Hispanic enrollees.

Rejectees vs. Admittees

UMM rejected 67 applicants (3 Asians, 15 blacks, 2 Hispanics, and 47 whites). One Asian, 1 Hispanic, and 31 white rejectees had ACT composite scores greater than the median ACT composite score for black admittees, but no rejectee was higher in high-school rank compared to the average black admittee.

There were only 13 whites, no blacks, and no Asians with ACT scores greater than the median score of Hispanic admittees at UMM, while no rejectee from any racial group had a higher class rank. Thus, no rejectees had ACT scores and high-school ranks greater than the median score and rank of Hispanic admittees.

UMM rejected only 6 whites with ACT scores greater than the median score of Asian admittees. There were no rejectees with higher class rank compared to the median high-school rank of Asian admittees, so there were no rejectees with both scores and ranks greater than the median score and median high-school rank of Asian admittees.

Graduation Rates, 1992 Cohort

- 26.7 percent of blacks
- 60.0 percent of Hispanics
- 50.0 percent of Asians
- 49.2 percent of whites

Hispanics at UMM graduate at the highest rate of the three groups. Whites and Asians graduate at roughly the same rate, while blacks graduate at roughly half the rate of Asians and whites.

University of Minnesota, Twin Cities

Applicants, Admittees, and Enrollees

In 1997 and 1998, 23,638 individuals applied for admission to the University of Minnesota, Twin Cities (UMTC). Of these, 20,021 were admitted and 9,176 enrolled. The overwhelming proportion of applicants, admittees, and enrollees was white.

UMTC applicants

- 5.1 percent black
- 2.8 percent Hispanic
- 7.3 percent Asian
- 84.8 percent white

UMTC admittees

- 4.9 percent black
- 2.9 percent Hispanic
- 8.1 percent Asian
- 84.1 percent white

UMTC admission rates

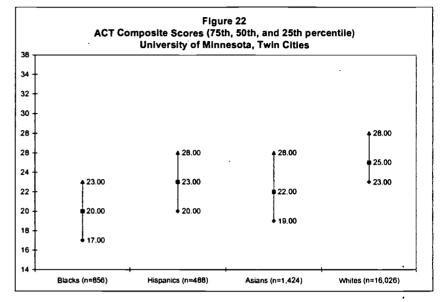
- 80.6 percent of black applicants
- 89.9 percent of Hispanic applicants



- 93.5 percent of Asian applicants
- 84.0 percent of white applicants UMTC enrollees
- 4.7 percent black
- 2.6 percent Hispanic
- 9.1 percent Asian
- 83.6 percent white

Differences in ACT Scores

Figure 22 shows the range of ACT composite scores by racial and ethnic group at UMTC. White admittees generally have better scores compared to the other racial and ethnic groups. The ACT composite score for white admittees at the 25th percentile is the same as the score for black admittees at the 75th percentile. This means that 75 percent of white admittees have ACT scores equal to or better than 75 percent of all black admittees. This score is the



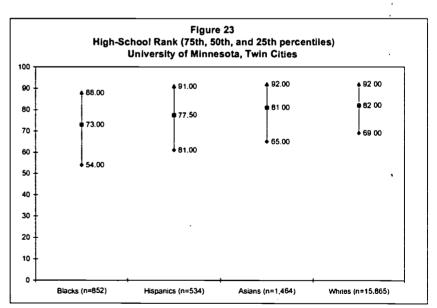
same as the Hispanic median, and slightly higher than the Asian median, which means that 75 percent of white admittees have better scores than half the Hispanic and more than half the Asian admittees.

Differences in High-School Rank

There is less disparity among groups regarding high-school rank. Most admittees for each racial and ethnic group graduate in the top half of their highschool classes. Whites and Asians on average graduate with somewhat higher class rank compared to Hispanic and black admittees. The median class rank for whites is the 82nd percentile, compared to the 73rd percentile for black admittees and the 77th percentile for Hispanics. (See Figure 23.)

Proportion Needing Remedial Education During First Year of College

- 28.3 percent of black enrollees
- 17.3 percent of Hispanic enrollees



BEST COPY AVAILABLE

ģ



- 12.5 percent of Asian enrollees
- 8.4 percent of white enrollees

A smaller percentage of white enrollees takes remedial courses compared to the other racial and ethnic groups. The differences are largest between blacks and whites. The percentage of blacks in remedial courses is more than three times that of whites. The percentage of Hispanics in remedial courses is more than double that of whites, while the percentage of Asians in remedial courses is about one and one-half the percentage of whites.

Rejectees vs. Admittees

1

UMTC rejected 3,617 applicants (113 Asians, 236 blacks, 66 Hispanics, and 3,202 whites). 19 Asians, 18 Hispanics, and 2,116 whites were rejected despite having ACT composite scores greater than the median score for black admittees, while 8 Asians, 2 Hispanics, and 61 whites had higher high-school ranks compared to the median high-school rank for black admittees. One Asian, one Hispanic, and 35 white rejectees had higher class rank *and* ACT composite scores compared to the average black admittee.

1,194 whites, 12 Asians, and 9 blacks were rejected by UMTC despite having higher ACT scores compared to the median score for Hispanic admittees. 21 whites, 5 Asians, and 2 blacks were rejected despite having higher high-school rank. There were 12 whites and 1 Asian rejected by UMTC despite having higher test scores *and* high-school ranks compared to the average Hispanic admittee.

UMTC rejected 1,531 whites, 10 Hispanics, and 14 blacks with higher ACT scores compared to the median score of Asian admittees. UMTC rejected 13 whites, 2 Hispanics, and 2 blacks with higher high-school ranks compared to the median high-school rank of Asian admittees. 7 whites and 1 Hispanic were rejected despite having higher test scores *and* high-school ranks compared to the average Asian admittee.

Graduation Rates, 1992 Cohort

- 33.8 percent of blacks
- 37.0 percent of Hispanics
- 48.6 percent of Asians
- 49.1 percent of whites

Blacks and Hispanics graduate at a significantly lower rate compared to whites and Asians. Despite Asians on average having lower ACT composite scores compared to whites, the two groups graduate at roughly the same rate.





CENTER FOR EQUAL OPPORTUNITY

The Center for Equal Opportunity (CEO) is a project of the Equal Opportunity Foundation, a non-profit research institution established under Section 501(c)(3) of the Internal Revenue Code. CEO sponsors conferences, supports research, and publishes policy briefs and monographs on issues related to race, ethnicity, immigration, and public policy.

Linda Chavez, President



23 **CEO** 24



E

U.S. Department of Education

Office of Educational Research and Improvement (OERI) National Library of Education (NLE) Educational Resources Information Center (ERIC)



UD033731

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: Preterences in Minnessta Highen Fanco	him-
Author(s): Jane & Nagai	
Corporate Source: Anter for Equal Apportunity	Publication Date:
II. REPRODUCTION RELEASE:	

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents	The sample sticker shown below will be affixed to all Level 2A documents	The sample sticker shown below will be affixed to all Level 2B documents
PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY	PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY	PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)	TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)	TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
1	2A	28
Level 1	Level 2A	Level 2B
Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) and paper copy.	Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only	Check here for Level 2B release, permitting reproduction and dissemination in microfiche only
	nents will be processed as indicated provided reproduction quality p reproduce is granted, but no box is checked, documents will be proc	
as indicated above. Reproduction f contractors requires permission from	sources Information Center (ERIC) nonexclusive permis rom the ERIC microfiche or electronic media by perso the copyright holder. Exception is made for non-profit rej ators in response to discrete inquiries.	ons other than ERIC employees and its system
Sign Signure	Printed Name/Po	GIUM, Communictions Direct
here, ->	Satte 928 E-Mail Address:	39-0803 FAX: 202/639-0827 Decouse. 00 Bate: 15 Aug 200
Wash Dr Ve	WS Januar	(over)

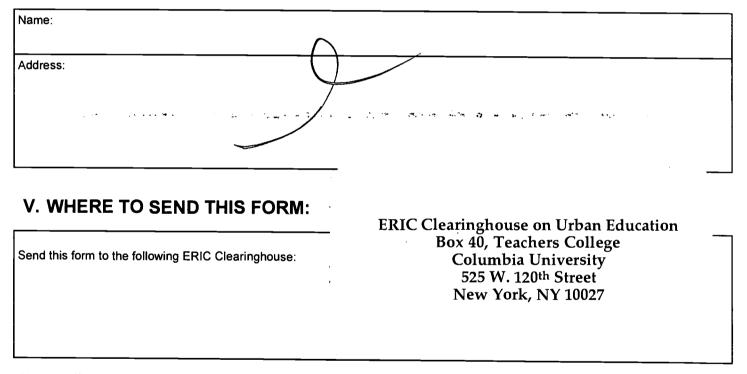
III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, *or*, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:	
Address:	
Price:	

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:



However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

ERIC Processing and Reference Facility 4483-A Forbes Boulevard Lanham, Maryland 20706

Telephone: 301-552-4200 Toll Free: 800-799-3742 FAX: 301-552-4700 e-mail: ericfac@inet.ed.gov WWW: http://ericfac.piccard.csc.com



ч. .