

**THE IMPACT OF INCREASED ADMISSION STANDARDS
AT NORTHEASTERN STATE UNIVERSITY ON THE
STUDENT POPULATION BY GENDER AND
ETHNIC STATUS AND STUDENT
ATTRITION**

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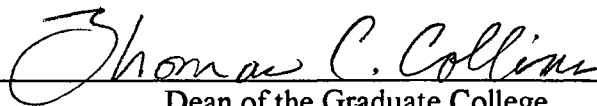


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PREFACE

This study was conducted to determine if any relationship existed between increased admission standards and the make up of the student body in reference to gender or ethnic status and between increased admission standards and the average attrition rate after new admission standards had been in effect at Northeastern State University. Within each classification the total number of students making application for admission was compared to the total number of students granted admission. In studying attrition, the population was limited to those students who were enrolled as first-time full-time freshmen in the fall semesters and consequently returned the ensuing spring semester in each of the four years.

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CHAPTER I

INTRODUCTION

The academic preparation a student receives in high school strongly correlates with grades a student achieves in college (ACT, 1991). Those students who graduate from high school are generally academically better prepared today than they were a few short years ago, primarily because of curriculum changes at the secondary level. However, a portion of these students are not adequately prepared academically to enter post-secondary education at the university level; such a lack of preparation limits their chances for academic success. Because of the limited resources available in Oklahoma, in part due to the institutional mission of Oklahoma's four-year institutions not to provide remedial courses and therefore the state not providing funding for this purpose, these inadequately prepared students appear to have little chance of success in a traditional academic program (OSRHE, 1989).

In acknowledging the shortcomings of these less adequately prepared students, in 1988 Northeastern State University (NSU) increased admission standards. With research indicating universities with higher admissions standards encounter a decline in attrition rate (Astin 1961; Cope and Hanna, 1975; Clewell and Ficklin, 1986; Tinto, 1987), and in an effort to reduce the financial loss suffered by institutions when students fail to persist, Northeastern State University approached the Oklahoma State Regents for Higher Education with the proposal of increasing admission standards.

With its attitude that strategy was more effective than disarray (Carhart, 1982), NSU embarked on the goal based on the amount of funding provided to establish education policies which would permit access to higher education for students who had shown motivation to learn, but to limit access for underprepared students. Adequate funding would be necessary to provide quality education for all students, regardless of an increase in the current levels of academic preparedness.

On June 27, 1988, Oklahoma State Regents for Higher Education issued a policy statement on "Standards of Education Relating to Admission of First-Time Entering Freshmen to Northeastern State University" changing the criteria to admit the best-qualified 1,000 first-time entering freshmen students with the understanding that the implementation of the new criteria would not deter the institution from maintaining a proportionately diverse student body by gender, race, and socioeconomic status.

Article XIII of the Constitution of Oklahoma provides that the OSRHE shall prescribe standards of education at each institution of the Oklahoma State System of Higher Education. These include admission to, retention in, and graduation from institutions in the State System. Beginning in 1962, the State Regents adopted a multi-tiered set of standards by type of institution, designed to allow the doctoral institutions to draw from the upper one-half of the high school graduating class, the regional and special-purpose universities to draw from the upper two-thirds of the high school graduating class, and the two-year college to draw from the total high school graduating class. Those standards have remained virtually unchanged through the years, although there have been a few changes in the criteria by which those standards have been implemented (OSRHE, 1988.)

The principles by which the State Regents prescribe standards for admission to colleges and universities provide for multiple criteria to be used. Historically the Regents have used three criteria: (1) Composite standard scores on the ACT program assessment battery; (2) high school grade point average for the four years of secondary school; (3) rank in the high school senior class. The 1987 norms for implementing the standards for admission to regional/special purpose universities indicated: (1) a minimum ACT score of 14; (2) minimum grade point average of 2.8; or (3) rank in upper two-thirds of senior class. This compares to the 1988 norms of: (1) a minimum ACT score of 15; (2) a minimum grade point average of 2.7; or (3) rank in upper two-thirds of senior class. The 1988 revised standards for NSU were: (1) a minimum ACT score of 18; (2) a minimum grade point average of 3.0; or (3) rank in upper one-half of senior class. Included in the increased norms for 1988 was the creation of Special Admissions. Special or Alternative Admissions allows a percent of the first-time freshmen to not be required to meet State Regents' curricular or high school performance criteria for admission. These students are considered to possess special talents which could not be measured by the normal admission criteria.

NSU is a comprehensive regional university and is one of ten regional universities. Its mission is to provide undergraduate and graduate education leading to bachelor's degrees, master's degrees in selected areas, and a doctoral degree in Optometry.

Statement of the Problem

The problems of this study are: did the implementation of increased admission standards alter the complexion of NSU's student body by gender or race and did the implementation affect the attrition rates? This study examined student records of some 4,000 first-time entering freshmen at Northeastern State University to determine whether increased admission standards might deter the institution from maintaining a proportionately-diverse student body and whether the overall attrition rate was affected by these increased standards.

The research questions are:

1. Is there a relation between increased admission standards and the composition of the student body in reference to gender and race two years after the increased admission standards have been in effect when compared to the student body two years prior to increased admission standards?
2. Is there a relation between admission standards and the average attrition rate for the two years prior to increased admission standards when compared to the attrition rate two years following the increased admission standards?

Need for Study

Permission to change admission standards for first-time entering freshmen at Northeastern State University limited admission to those students possessing particular academic criteria of a 3.0 grade point average, a composite score of 18 on the American College Test, or a high school rank which placed the student in the upper one-half of their graduating class. These standards were granted with the provision

that the increased admission standards would not alter the composition of the institution's student body in reference to gender or race.

The need for the study is to determine whether the implementation of the increased admission standards had any measurable impact upon the composition of the student body. In addition, did the implementation of those same standards have any measurable impact upon attrition?

Most of the research found in the review of the literature focuses on admission standards relating to gender and ethnicity as well as attrition of college students. This research has generally found that the act of "increasing admission standards" will affect the admission of a diverse student population. More than two years after the implementation of these standards, the questions to be answered are whether these admission standards in any way altered the make up of NSU's student body by gender or race and if overall student attrition was affected by these increased standards.

Limitations

This study only reported on students who were admitted to Northeastern State University in the fall semesters of 1986, 1987, 1989, and 1990. Those students who were admitted during 1988, the year of the policy change, were not included in the study. Students applying for admission before July 1, 1988 were admitted under different standards than those admitted after that date, thus, providing contradicting data for 1988.

Related to the data collection, there are inherent problems. High school grade point average and percentile rank in a graduating class does not necessarily represent

the same level of achievement for all individuals and standardized tests are not always an accurate predictor of academic success.

Other components which could have contributed to a change in the complexion of the student body or the attrition rate relates to economic factors in Oklahoma and the nation occurring during the period from 1986 through 1990.

Lastly, there were changes within NSU. The implementation of Weekend College and Multi-Cultural Services could have influenced the students perception of NSU as a culturally diverse institution of higher education. Distinctive scholarship programs created especially for first-time freshmen could have also alleviated financial burdens for some incoming students therefore encouraging more applicants. Also the implementation of a New Student Advisement Center in the Fall of 1987 could have contributed to a change in the attrition rate. The reduction of course offerings in the College of Business could have indirectly affected a student's decision to attend or stay at NSU.

Operational Definitions

Academic aptitude: The composite score on the American College Test (ACT) or similar aptitude tests which is on file in the Office of Admissions.

Attrition rate: The percentage of students who were enrolled on a full-time basis in the fall semester of the fall semesters of 1986, 1987, 1989, and 1990 and did not return for the spring semester of that academic year.

Ethnic status : The racial class provided by the student on the university admission form.

Gender: The male or female status provided by the student on the university admission form.

Increased Admission Standards: The difference of each criterion respectively: ACT Score from 15 to 18; Grade Point Average from 2.7 to 3.0; and rank in class from upper 66% to upper 50% (OSRHE).

Other Minority: The array of all students who did not self report as White, Black, or Native American.

Precollege Schooling: The cumulative high school grade point average and percentile rank in graduating class.

Test of Reasonableness: A level chosen by the author to be used as a test for interpreting the data relative to the maintenance of a proportionately diverse student body as prescribed by the OSRHE.

Summary

Not all students who graduated from high school are adequately prepared to enter post-secondary education at the university level. NSU, in an effort to maintain their level of quality education and simultaneously maximize their appropriated funding, limited enrollment through increased admission standards. Based on the projected growth pattern of the university and state financial assistance, the NSU administration established education policies which would permit access for students who had met minimum academic criteria, while limiting enrollment to a maximum of 1,000 first-time entering freshmen. This study examines two possible effects of that change.

The remainder of the study is as follows: Chapter II provides the review of relevant literature concerning ethnic and gender status in relation to admission standards, and studies of attrition or student departure. In Chapter III the methodology is discussed. In Chapter IV the results are presented and analyzed. Chapter V presents a summary, analysis of the data, conclusions based upon research results, and recommendations for additional research.

CHAPTER II

REVIEW OF RELATED LITERATURE

INTRODUCTION

The face of young America is changing, and the future post-secondary student population will include more Blacks, Native Americans, and Hispanics than ever before. As the number of these students graduating from high school increases, the percentage of those enrolling in higher education appears to be decreasing. Educators do not want to impose standards which will impede the progress of these select students nor do they want to place barriers which can hinder these students in their struggle for education. However, simultaneously educators do not want the quality of education to decline. Therefore the challenge is to determine if increased admission standards, which act as a filtering mechanism for academically under-prepared students, imposes restrictions for students of the under-represented population.

A review of the literature found distinct types of research relevant to this investigation. The first section reviews factors of increased admission standards and criteria. The second section presents literature relating concerns associated with ethnic and gender status relative to admission standards. The concluding section presents studies of attrition or student departure which provide illustrations of what factors weaken a student's level of persistence (Tinto, 1975). This section generates a more

insightful and detailed supposition for why, if any, alterations have occurred in the diversity of the student population since the implementation of the increased standards at NSU in 1988. The ensuing pages will introduce the most important components, as well as overlapping elements, from each segment of literature and how each relate with the stated questions of the study.

Admissions Standards and the Student Body

Relative to Race and Gender

Since the publication of A Nation at Risk, raising university admission standards have become a national trend. In a survey done by the University of the State of New York (1989) more than fifty percent of all institutions reported raising their admission standards in reference to high school course work. And, nearly half of the institutions of higher education raised the minimum high school grade point average and composite standardized test score needed for admission. In a survey done in 1988 institutions such as the University of Arkansas, North Texas State (now University of North Texas), University of Tulsa, Oklahoma State University, the University of Oklahoma and Central State University (now the University of Central Oklahoma) who took part in the study reported either implementing new admission standards or appointing a committee to study the possibilities. The most common reason given was to increase the students chance at academic success (NYSED, 1989).

A statewide plan in Maryland consisted of a five-year program to provide for appropriate admissions criteria for predicting student success. All of Maryland's public four-year institutions, which admit freshmen, have implemented higher entrance requirements with hopes of reducing the attrition rates (MSDE, 1982). Not all states

have implemented admission changes, but all have addressed this issue in some form. Obviously, as with all policies, admission policies can differ by institution and by state. In most two-year college the admission policy is "open door," while other more elite institutions have very rigid admission requirements (Nettles, Theony, and Gosman, 1986).

One of the most comprehensive studies of policy decisions concerning admission standards was completed by Sherrod (1981). The purpose of his investigation was to examine major components influencing admission policies and particular constraints associated with these policy changes. In his findings were specific restrictions relating to financial difficulties. This provided the basis for the implementation of increased admission changes in the Fall, 1981 at the University of Tennessee. These changes were effectively brought about in order to maintain quality education with limited resources.

The South Carolina Commission of Higher Education (SCCHE) proposed increased admission standards be implemented in the Fall of 1988 to "enroll and maintain our best students" (SCCHE, 1987, pp 4). In the justification for the increased standards, the SCCHE cited the preparedness of secondary students as the primary factor. The proposal also called for the universities to "ensure both appropriate access and excellence for all students" (SCCHE, 1987, pp 4).

The Oklahoma State Regents for Higher Education (OSRHE) implemented admission policy changes for all four-year public institutions in 1988. These policy changes were approved for the upgrading of standards in order to maintain quality education in the state. Increased support for these policy changes existed after

increased High School Curricular Requirements were implemented in the secondary schools beginning in 1988.

The Ford Foundation in 1984 examined the effects of rising admission standards on post-secondary enrollment. Among other determinants was the intention of policy-makers in higher education to raise admission standards without affecting access for minority students (NYSED, 1989). Although most research shows a concern for minority access, there has been almost no research to determine a cause-effect relationship between admission standards and minority admission rates.

As with all policies, admission policies and processes imply limitations. When related to admissions, policies limit access. As access is limited there will no doubt be a decrease in the number of students matriculating. However, where there is only a desire to slow down the process, restrictions and limitations evolve (Herman, 1981).

The difference in admission and access is slight, but the distinction between these concepts merits attention. Admission to higher education is part of the administrative taxonomy used to describe the rules and regulations by which institutions determine access. Access has more of a sociological connotation and describes the process by which specific groups or individuals actually enter higher education (Herman, 1981). A key question becomes: Has the state and the university considered the extent of the long term effects of access when reaching decisions on admission standards to improve existing conditions (Butler, 1984)?

Access discussions usually center on whether or not institutions of higher education are willing to admit high school graduates regardless of sex, ethnicity or class (Hodgkinson, 1985). In 1989 the University of Oklahoma received permission from the OSRHE to lower its admission standards for minority students with respect to

standardized test scores. This change was in response to the concern that many of the college entrance exams are culturally biased against minorities (Lyons, 1989). And, a (1989) Vancouver study showed a principal concern in increased admission standards is the potential for biased or unjust preference of students from under-represented populations.

Although the movement towards higher admission standards is not intended to limit access for minorities, it may place a damper on efforts to halt the erosion over the last decade in the rates of black and Hispanic high school graduates who go to college (NYSED, 1989). This New York study also concluded that there appears to be a relationship between rising admission standards and the decline in minority enrollments. This suggests that the minority enrollment problems of the 1980's are continuing and in some cases worsening as we move through the 1990's.

Increased admission standards have not gone unnoticed in the black population. The Texas Commission of Higher Education claims that "with the accent on standardized tests, class rank, and required course work, without regard to individual capabilities will limit black representation in higher education" (NYSED, 1989, pp. 29). A policy of elitism does not address the higher education needs of Black Americans. Policies that are formulated to admit only high achieving students who have been socialized to fit the university's image will exclude the majority of black youth (NYSED, 1989).

Over the past decade Black students in higher education have shown a decline in enrollment. In a recent survey by the State University of New York those institutions reporting reveal that between 1976 and 1985 the percentage of black high school graduates entering college had decreased nearly 10 percent (NYSED, 1989).

Two contributing factors cited were increased admission standards and inadequate preparation for postsecondary education that most minority students receive.

Nationally Native Americans have had difficulty with financial aid, poor academic preparation, or personal problems and therefore have not had success in higher education (Mitgang, 1989). However, findings show over the past few decades that in Oklahoma, Native Americans have made progress in most areas of higher education. According to a study by Bread (1989), Oklahoma Native Americans represented the most formally educated group of Native Americans in history. Bread suggested this is true, in part, because of the significant number of individuals who not only were admitted to higher education, but also obtained their degree. As these successful students were basking in the glory of their progress, little did they realize the restrictions to be placed on prospective Native American students. For, with the emergence of higher admission standards throughout higher education in general, and Oklahoma specifically, it was estimated that approximately 25 to 40 percent of potential American Indian higher education students will not enroll in Oklahoma colleges during the 1990-91 academic year (Bread, 1989). Increased admission standards coupled with relatively high attrition rates for Native Americans and federal and state cutbacks in financial assistance are ingredients which could very well destroy the progress of the past decades (Wells, 1989).

A Journal of Higher Education article by Nettles, Theony, and Grossman (1986) state that certain student personal, attitudinal, and behavioral characteristics are better predictors of minority enrollment performance than are standardized test scores. In addition others have registered objections to the credibility of standardized test scores.

FAIRTEST, the National Center for Fair and Open Testing, conducted research to determine if college entrance exams (standardized tests) were culturally and sexually biased against women and minorities. Called a "brash white boy's game" the test was said to measure different things for different people (Wiley, 1989, pp. 6).

Relaxed admissions policies are necessary to include potential leaders from both sexes, all nationalities, all ethnic and racial groups. "The strength of the state system lies in its diversity and in the flexibility of each university to experiment and to implement its own programs" (SCCHE, 1987, pp.4). However, the report goes on to state that this flexibility should not impede a students' access to higher education and should adhere to the mission of higher education by providing a quality learning environment, without denying entry because of ethnic or gender factors.

Over the past decade, Miami-Dade Community College and other institutions which have large numbers of minority student enrollment have initiated changes in several policy areas which stress academic skills even if this tends to limit access (Richardson, 1983). The experiences of those community colleges show they were willing to accept a decline in student enrollment in return for an improvement in achievement for those who remain.

Donald Stewart, President of the College Board, responded to the matter of admission and access and its effect on quality education:

A successful system will have standards that are just as high or higher, but quality will be defined in terms of proportion of students who are enabled by the system to meet those standards.....Educational achievement need not be constrained by racial class or national origin. Educational quality for some can best be realized when we seek educational advancement and achievement for all" (Stewart, 1987, pp.27).

Perhaps the bounds of good judgement have been exceeded in the modification of admission standards in turn limiting the fact that all may succeed. Some students may have to fail or even be excluded if higher education is to remain an avenue of social mobility for the academically underprepared.

The demographic changes in higher education, also have implications concerning gender status. Over the past quarter of a century there has been more than a twenty percent increase in the number of women in higher education (Chandler, 1989). Studies have found that women have higher pre-college schooling than men, yet they consistently score lower on the academic aptitude segments (ACT, 1991). As an indirect outcome of these studies the Massachusetts Institute of Technology admission procedure includes a weighted score on the test for academic aptitude in dealing with the admission of female students (Allina, 1985).

Higher education has been seen as a vehicle for upward mobility, particularly for those who have traditionally been denied the opportunity for advanced education (Thompson, 1985, Vaughn, 1983). With changing demographics and the predicted shortage of young people, this country and our educational institutions cannot afford to exclude possible successors to leadership positions. "For individuals, education remains the vehicle for the American dream; for the nation, the means to a more civilized, productive, and just society" (Mingle, 1988, pp. 20).

Admission Standards and Attrition

Planners and administrators are increasingly challenged in their efforts to resolve problems arising from attrition. Administrators in institutions of higher education recognize the lack of retention of enrolled students meeting academic

requirements may be a more effective and less costly means of extending the operational budget (Terenzini, 1987). Since the attrition rate has a heavy impact on funding and institutional operations, a study of why certain students leave particular institutions can be very beneficial, and in many cases, indicate corrective actions that might encourage retention (Tinto, 1975). "With careful reconsideration of missions and selective course offerings, institutions under fiscal or enrollment pressure, or both, might be able to position themselves effectively to best serve the needs of the diverse population of learners that will seek them out in the 1980s" (Gardiner and Robati, 1990, pp. 32).

Research has shown that the reasons for attrition will be different depending upon which subculture of students are analyzed (Allen, 1987). What path the student follows after admission, and whether the student achieves a quality education, will depend on the student's entering skills (Thompson, 1985). Increased admission standards and attrition have a negative correlation; this correlation could be attributed to the research of post-secondary education which states precollege traits and the quality of student effort are important for the reduction of attrition rates (Pascarella, 1985, Stodt, 1987). Studies by Spady (1970) and Aitken (1982) agree in that the research relative to attrition exhibits a high correlation between the lack of academic performance and non-persistence in college.

A follow up survey by Astin (1987) reveals attrition rates have increased over the past decades. From the survey Astin concluded that "the most important predictors in lack of retention are the student's high school grades and admission test scores" (Klepper, Et Al, 1987, pp.78). Noel, Levitz, and Saluri's (1983) study of attrition in indicated a relationship between precollege schooling/academic attitude and attrition.

Lenning (1980) reported that lower academic aptitude is related to higher attrition and that pre-college schooling has a higher relationship to student attrition than any other factor.

A special concern is the attrition rate among minorities. The New York Regents reported in 1988 that black and hispanic students dropped out of college in New York State at higher rates than whites students (NYSED, 1989). Robinson (1989) found that students leave for various reasons which institutions cannot control. However, she found that of the black students she studied, fifty percent had been on academic probation at least once and most of them after the first semester of their freshmen year (Robinson, 1989). Relating to the same subgroup, a Bennet and Bean (1984) study determined that "neither high standardized test scores nor high grades in college were good predictors of college satisfaction or persistence for blacks". Wells (1989), in his survey on Native Americans and what characteristics influenced their lack of success and persistence in college, determined that more than fifty percent of Native American students leave during their freshmen year.

A gender related study showed that more men drop out during the freshmen year and that women are more likely to persist if the male/female ratio is low. Academics is cited as a factor of attrition more often for men than women (Lenning, 1980). Concerned with the inability to determine how and why different retention efforts are successful with regard to individual institutions of higher education and subgroups therein, Allen and Nelson (1987) conducted a study using Tinto's Model of College Withdrawal. The results from this study revealed that background characteristics played only a small role in prediction of student's persistence, while social integration had an indirect effect.

Duquesne University implemented a retention program generated from data including pre-enrolled, enrolled, non-returning, and alumni surveys. In addition transcripts of non-returning students were analyzed to determine the institutional attrition rate. It was determined that the attrition rate was within the acceptable norm. However, since the budget was tied to student retention, the institution decided to implement a committee for further research. This committee recommended the following: (1) university wide committee on retention to establish attrition reduction goals; (2) continued survey research with students prior to enrollment, during enrollment, on leaving and at graduation; (3) new student seminars; (4) centralization of academic and career advisement; (5) development of placement testing for English, Math, and Modern Languages; and (6) student evaluation of teaching effectiveness (Kleppner, Nelson, & Milner, 1987).

The University of Delaware, in attempt to decrease the attrition of black students, implemented a new retention program. The institution had made progress in the enrollment of black students; however, legal ramifications prompted the development of a more comprehensive program. The program established the following directives: each academic dean had to (1) establish a college advisory committee and encourage departments to include relevant materials about black culture, and plan and implement programs on the retention of black students; (2) develop and implement procedures for individualized counseling and advising of black students; (3) provide special advising and recognition for top black students; (4) review pre-enrollment and compare with previous academic preparations; and, (5) identify black students to be academic tutors and provide a positive environment where black students could study (Shareky, et al, 1987).

Summary

In summary, the research examined major components influencing admission policies and particular constraints associated with these policy changes. The primary reasons for increased admission standard have been to increase the students' chance at academic success and to filter those secondary students who are lacking in academic preparation.

The research indicated an apparent relationship between rising admission standards and the decline in minority enrollments. There is great concern that policy-makers in higher education to raise admission standards without affecting access for minority students.

The fundamental responsibility of an institution of higher education is the education of its students. In order to achieve this every institution of higher education should ensure the students have reached a level of pre-college schooling and academic aptitude thus cultivating a successful college student. Admission policies are a necessary filtering agent in attainment of this goal. However, flexibility must be utilized in the implementation or augmentation of such standards as to continue to provide access for all students regardless of gender or ethnicity.

Also, research has shown that the reasons for attrition will be different depending upon which subculture of students are analyzed. In addition the most important predictors in lack of retention are the student's high school grades and admission test scores.

A declining attrition rate should not be a fundamental responsibility in higher education, but rather a by-product of the improved quality and advancement of

educational programs and services. Tinto (1991) stated that institutions which possess low attrition rates know that student retention transpires from student satisfaction and success.

CHAPTER III

METHODOLOGY

Introduction

The primary purpose of this study is to determine if any relationship existed between increased admission standards and the make up of the student body in reference to gender or ethnic status and between increased admission standards and the average attrition rate after these new admission standards had been in effect at Northeastern State University. This chapter represents the methodology for investigating the problem, collecting, and analyzing information needed.

Population

The total population used in this study consisted of some 4,000 first-time entering freshmen at Northeastern State University (NSU) in Tahlequah, Oklahoma. The population included all students entering NSU in the Fall of 1986, 1987, 1989, and 1990. The admission standards were changed during the 1988 admission period and students were admitted both through the old and new standards, thus, creating an abnormal application/admission ratio; therefore, 1988 was omitted from the study.

This study addressed the student population by ethnic and gender classification. Within each classification the total number of students making application for

admission was compared to the total number of students granted admission. In studying attrition, the population was limited to those students who were enrolled as first-time full-time freshmen in the fall semesters and consequently returned the ensuing spring semester in each of the four years.

Research Questions

1. Is there a relation between increased admission standards and the composition of the student body in reference to gender and race two years after the increased admission standards have been in effect when compared to the student body two years prior to increased admission standards?

2. Is there a relation between admission standards and the average attrition rate for the two years prior to increased admission standards when compared to the attrition two years following the increased admission standards?

Data Collections

The total number of the first-year full-time students was identified by perusing data collections in the Office of Admissions and Records at NSU. Information on students included academic aptitude, precollege schooling, gender, and ethnic status for each student. The records for academic aptitude were provided by the American College Testing Program or College Board. These standardized test scores were accepted from the previous programs only and were not accepted as self-reported. The pre-college schooling was determined by analysis of high school transcripts for each student. Each transcript included the high school grade point average and high school rank or at minimum the information from which to calculate each. The gender and

ethnic status was determined from the application for admission which each student had previously completed.

Analysis of the Data

The data were analyzed to determine if the admission criteria implemented by the OSRHE in any way deterred NSU from maintaining a proportionately diverse student body relative to gender or race. For this study a test of reasonableness was conducted using z-scores. The z-score expressed how far a score for a particular year was from the mean of the four years studied in terms of standard deviations. This allowed for a measure of relative position, each year's score was positioned relative to other scores in the same gender or ethnic classification. This analysis strategy permitted an expression of differences among all scores in each classification and created a common frame of reference for comparison among scores from different populations. The z-score method was also used in determining a comparison among attrition rates.

The Regents, in allowing NSU to increase admission standards, did not want to alter in a major way the proportionately diverse student body. However, the Regents did not provide a precise definition of what a major or minor change in proportionality might be.

To illustrate the differences in the z-scores among and between classifications, the establishment of some test of reasonableness was determined. This level referred to whether the obtained scores was really different from zero and reflected a true change. To determine if a change existed, a level of reasonableness of less than one-half standard deviation was chosen. In other words, any change less than one-half a

standard deviation will be treated as not affecting the proportionality of the student body. Because the large amount of data collected included every member of each first-time freshmen in the four targeted years, the chosen level of reasonableness should be representative of change. This includes a change for each sub-group in the population. To determine the z-scores, the total student population for each ethnic and gender classification was determined. Ethnic population was classified as Blacks, Native Americans, and Whites and others.

Measures of central tendency were computed to indicate where scores tended to cluster in a distribution. Within each of these student populations the raw score was used to calculate the mean, variation, sums of squares, and standard deviation. From those figures the z-scores were calculated by dividing the variation by the standard deviation in each population. The same procedure was utilized in determine z-scores for gender and attrition.

Once the z-scores were computed a comparison to determine the level of reasonableness was conducted. The analysis of scores within each subgroup included an examination of the range of z-scores, as well as, the differences in scores relative to the mean. The range indicated the greatest change when analyzing all four years and the standard deviation allowed the determination of difference in z-scores for first-time freshmen for consecutive fall semesters. The differences from fall to fall were utilized to determine a difference of more than one-half standard deviation from the mean. Tables reflecting this data were developed. The presentation and analysis of data appear in Chapter IV.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

This chapter analyzes the populations for first-time freshmen at NSU for the falls of 1986, 1987, 1989, 1990. These populations consisted of some 4,000 applicants for admission in those targeted fall semesters. The records were examined to determine changes in the student population relative to gender status and ethnicity and the increased admission standards implemented in July of 1988. The data was reported by (1) total applicants/admissions; (2) applicants/admissions by ethnicity; (3) applicants/admissions by gender status; and (4) admissions/attrition rate.

Presentation of Data

Total First-Time Freshmen Applicants and Admissions for 1986 through 1990

The total number of applications for first-time freshmen for the fall semesters of 1986, 1987, 1989, and 1990 is contained in Table I. Also included in the table is the number of students admitted for those same fall semesters and the range of differences when compared to 1986. The fall semester of 1988 was the academic year

TABLE I

TOTAL FIRST-TIME FRESHMEN APPLICANTS
AND ADMISSIONS FOR 1986 THROUGH 1990

Fall Semesters						
	1986	1987		1989	1990	Range
Applicants	1314	1444	-	1257	1233	
difference		(130)	-	(-57)	(-81)	211
Admitted	1133	1243	-	1207	1154	
difference		(+110)	-	(+74)	(+21)	110

of transition and therefore was not reported. Overall, as the number of applicants decreased (range = 211) the number of admissions increased (range = 110).

Total First-Time Freshmen Applicants and Admissions
for 1986 through 1990 by Ethnicity
and Gender Status

Tables II and III indicated the total number of first-time freshmen applicants and admission for ethnic and gender status, respectively. The total number of Black applicants varies for the four year period. There was a significant decline of more than 30 applicants from 1986 to 1987 and then a slight increase from 1989 to 1990. The number of admissions also indicated mixed results with yearly decreases/increases of ten or less and a range of 15.

The number of Native American applicants remained basically the same where a range depicted a difference of only 9. Native American admissions parallels the application pool except for the difference between 1987 and 1989 where the range indicated an increase of 41.

Whites and other applicants made up the remainder of the student population and demonstrated an increase from 1986 to 1987 and then steadily decreased to a low of 893 in 1990. The range displayed differences of 217 from the fall of 1987 to the fall of 1990. For admissions in the same population, the table indicated an increase from 1986 to 1987, a small decrease from 1987 to 1989 and then a larger decrease from 1989 to 1990. The range of 130 occurred from the fall of 1986 to the fall of 1987.

TABLE II
TOTAL FIRST-TIME FRESHMEN APPLICANTS
AND ADMISSIONS BY ETHNIC STATUS.

		Fall Semesters					
		1986	1987	-	1989	1990	Range
Blacks							
Applicants	91	66	-	60	72		
	difference		(- 25)	-	(-31)	(-19)	31
Admitted	70	62	-	55	65		
	difference		(-8)	-	(-15)	(-5)	15
Native Americans							
Applicants	267	268	-	276	268		
	differences		(+1)	-	(+9)	(+1)	(+9)
Admitted	232	228	-	269	259		
	differences		(-4)	-	(+37)	(+27)	(41)
Whites and Others							
Applicants	965	1110	-	921	893		
	differences		(+145)	-	(-44)	(-72)	217
Admissions	831	953	-	883	830		
	differences		(+122)	-	(+52)	(-1)	123

TABLE III

TOTAL FIRST-TIME FRESHMEN ADMITTED BY GENDER STATUS.

		Fall Semesters					
		1986	1987	1989	1990	Range	
Male		519	554	-	538	474	
	differences		(+35)	-	(+19)	(-45)	80
Female		614	689	-	669	680	
	differences		(+75)	-	(+55)	(+66)	75

The data regarding applications and admissions relative to gender status demonstrated that as the total number of male applicants decreased the number of female applicants increased. Table III also depicts the range of female and male admissions reciprocal with an increase of 75 and decrease of 80 respectively.

Total First-Time Freshmen Attrition Rate from
Fall to Spring from the Fall of 1986
to the Spring of 1991

The students failing to persist from fall to spring for each targeted year, as demonstrated in Table IV, declined from 170 to 130 from 1986 to 1987. This is the only category where the range and difference from two years prior to admission changes and two years after admission changes are identical.

Summary of Measures of Central Tendency
by Ethnicity and Genders Status

In addition to the raw scores, Table V compares the mean of the four years, the differences in the four years and the mean, and the standard deviation for the first-time freshmen populations classified by Black, Native Americans, and Whites and others. Table VI furnishes data relative to the scores of central tendency by gender status. Raw scores were used to calculate the mean, differences, and standard deviation.

Total z-scores by Sub-Populations

Table VII displays the test of reasonableness ($\pm .5$ SD) and the z-scores for ethnicity, gender, and attrition. For Black students the z-scores indicated a variety of

TABLE IV

TOTAL FIRST-TIME FRESHMEN ATTRITION RATE.

		Fall Semesters				
		1986	1987	1989	1990	Range
Admitted	1133	1243	-	1207	1154	
differences		(+110)	-	(+74)	(+21)	110
Attrition	170	155	-	154	130	
differences		(-15)	-	(-16)	(-40)	40

TABLE V

SUMMARY OF MEASURES OF CENTRAL TENDENCY BY ETHNICITY

	Admitted	Mean of 4 years	Difference for 4 year average	SD for for 4 years
Black				
1986	70	63	7	5.43
1987	62	63	-1	
1989	55	63	-8	
1990	65	63	2	
Native American				
1986	232	247	-15	17.42
1987	228	247	-19	
1989	269	247	22	
1990	259	247	12	
Whites and Other				
1986	831	874.25	-43.25	50.27
1987	953	874.25	78.75	
1989	883	874.25	8.75	
1990	830	874.25	-44.25	

TABLE VI
MEASURES OF CENTRAL TENDENCY BY GENDER STATUS

	Admitted	Mean of 4 years	Difference of 4 year average	SD for 4 years
Male				
1986	519	521.25	-2.25	29.893
1987	554	521.25	32.5	
1989	538	521.25	16.75	
1990	474	521.25	-47.25	
Female				
1986	614	663	-49	29.163
1987	689	663	26	
1989	669	663	6	
1990	680	663	17	

TABLE VII

TOTAL Z-SCORES BY SUB-POPULATIONS

	- 2.0	- 1.5	- 1.0	- 0.5	0	0.5	1.0	1.5	2.0
	*B89					*B87		*B90	*B86
		*NA87			*NA86		*NA90.		*NA89
		*W90*W86			*W89				*W87
	*M90				*M86	*M89		*M87	
	*F86				*F89	F90		*F87	
	*A90				*A87*A89			*A86	

Note: B = Black; NA = Native American; W = Whites and others; M = Males; F = Females; A = Attrition Rate

results. The score for 1989 was below and for 1986 and 1990 was above the test.

The z-score for 1987 acceptable.

The Native American student population demonstrated a continual increase after being below the test in 1987. The z-score for 1986 was acceptable and 1989 and 1990 above the test.

For the white and other student population, the z-score fell below the test in 1986 and again in 1990. However, 1989 was acceptable and 1987 was above the test.

The male population was acceptable for 1986 and above the test for 1989 and 1987. However, it fell below the test in 1990. After being below in 1986, the female population grew to an acceptable value for 1989 and was actually above the test for 1987 and 1990.

Table IV indicated attrition was above the test in 1986 and decreased steadily for 1987 and 1989 to actually fall within the test of reasonableness. In 1990 the score was well below the test which indicated attrition actually decreased.

Analysis of Data

Increased Admission Standards and Student Population by Ethnic and Gender Status

While applying the test of reasonableness for the Black, White and other, and male student populations, the level of difference is greater than the prescribed 0.5 change in the standard deviation for three of the four years.. This change reveals

mixed results with variations and declines in the latter years indicated that admission standards had a negative influence on these sub-populations.

When the test of reasonableness was applied to the z-scores for the Native American and female student population, it indicated scores which were acceptable or greater than a 0.5 difference in standard deviation in three of the four years. This level of difference was progressive from the fall of 1987 to the fall of 1990. This indicates a positive relation between increased admission standards in reference to the Native American and female student populations. The variation of the level of differences would support the claim that there is a relation between increased admission standards and the composition of the student body in reference to gender and race. This claim is for the two years after the increased admission standards have been in effect when compared to the student body two years prior to increased admission standards.

The Increased Admission Standards and Attrition

The test for reasonableness relative to the attrition rate indicated a change in the level of difference for each of the semesters from 1986 to of 1990. The z-scores indicated that 1986 was above the .5 level and decreased over the following semesters. For 1987 and 1989 the z-scores fell in the acceptable range and 1990 was below the test. This level of change clearly indicated a relation between admission standards and the average attrition rate for the two years prior to increased admission standards when compared to the attrition two years following the increased admission standards.

Alternative Expectations and Related Data

Admission Rates and Special Admissions for First-Time

Freshmen By Ethnic and Gender Status

for 1986, 1987, 1989, 1990

Higher admission standards usually produce a lower admission rate. Table VIII indicates a higher admission rate after the increased standards when compared to prior standards. However, when the number of students admitted through special admissions is excluded as a portion of those admitted, then the admission ratio is basically the same for the years after the increased standards when compared to those years prior to the increased standards. With the deletion of special admission students, the ratio of first-time Black freshmen decreased nearly 20%, Native American 12%, and Whites and others 9%. The admission rates related to gender status indicates the ratio of males was reduced by 13% while the number of females was reduced by only 4%.

This would indicate the increased admission standards had no impact on the overall admissions at NSU, but did impact the sub-population of Blacks and to some extent males. With nearly 20% of the Black first-time freshmen being admitted through special admissions this signifies that those students did not meet the increased admission standards. This clearly implies that the increased admission standards did impact the Black student population at NSU.

TABLE VIII

ADMISSION RATES AND SPECIAL ADMISSIONS FOR
FIRST-TIME FRESHMEN BY ETHNIC AND GENDER
STATUS FOR 1986, 1987, 1989, 1990

Fall Semesters	1986-1987	1989-1990
Black		
Ratio Applicants/Admissions	84%	91%
Ratio Applicants/Adjusted Special Admissions		73%
Native American		
Ratio Applicants/Admissions	86%	97%
Ratio Applicants/Adjusted Special Admissions		86%
Whites and Others		
Ratio Applicants/Admissions	86%	94%
Ratio Applicants/Adjusted Special Admissions		86%
Male		
Ratio Applicants/Admissions	83%	93%
Ratio Applicants/Adjusted Special Admissions		80%
Female		
Ratio Applicants/Admissions	93%	96%
Ratio Applicants/Adjusted Special Admissions		90%
Total		
Ratio Applicants/Admissions	86%	94%
Ratio Applicants/Adjusted Special Admissions		85%
Adjusted Special Admissions is Admissions minus Special Admissions.		

First-Time Freshmen ACT Composite Scores of
Eighteen or Greater for 1986-1987 and
1989-1990 by Ethnicity

Another concern related to the data is "did the quality indicators increase"? Is NSU admitting a more academically prepared first-time freshmen? Table IX indicates the change in academic aptitude by comparing first-time freshmen ACT composite scores of 18 or greater. The data indicates that there was an overall increase of 6%. The Black and Native American student population shows a significant increase with the Whites and others only a slight increase. This implies the quality indicators did increase and NSU's first-time freshmen population was more academically prepared after the increased admission standards than prior to the increase.

A Comparison of First-Time Freshmen Enrollments
of Oklahoma's Regional Institutions and
NSU for 1986 through 1990

Table X signifies a trend in enrollment at Oklahoma's four-year regional institutions during the years of 1986, 1987, 1989, and 1990 for first-time freshmen. This comparison indicates an overall decline for all institutions beginning in the fall of 1989. Although the average decline for the other institutions was slightly greater than the decline for NSU, it is important to note that for 1988 when the admission changes became effective NSU had an enrollment decrease of more than 11% compared to

TABLE IX

FIRST-TIME FRESHMEN ACT COMPOSITE SCORES OF EIGHTEEN
OR GREATER FOR 1986-1987 AND 1989-90
BY ETHNICITY

Fall Semesters	1986-1987	1989-1990
Black	17.4%	26.6%
Native American	39%	51%
Whites and Others	55%	60%
Total	50%	56%

TABLE X

A COMPARISON OF FIRST-TIME FRESHMEN ENROLLMENTS
OF OKLAHOMA'S REGIONAL INSTITUTIONS AND
NSU FOR 1986 THROUGH 1990

Fall Semesters	1986	1987	1988	1989	1990
Other Institutions					
Enrolled	7,749	8,330	7,226	6,958	6,207
Change		(+1.0%)	(-7.0%)	(-3.7)	(-2.0%)
NSU					
Enrolled	1,080	1,245	1,107	1,062	(1,029)
Change		(+15.3)	(-11.1%)	(-4.0%)	(-3.1%)

Source: OSRHE's Student Data Report, Oklahoma Higher Education 1991-1992

only 7% for the rest of the state. The 11% decline for NSU in the fall of 1988 follows an increase of more than 15% for the previous fall semester.

These enrollment trends suggest that NSU did not mirror the trend of the other four-year institutions in the state. This is predominately observed in the years after the increased admissions standards had been implemented.

A Comparison of Enrollments of Oklahoma's Regional
Institutions and NSU for 1986 through 1990
by Gender and Ethnicity

Table XI indicates all other regional institutions show a slight increase in Black student enrollment for 1986 and 1987 then maintains those enrollment numbers through 1990. NSU's Black student enrollment demonstrates a decline over the same time span. The average decline was 2.5%. While the Native American student population at NSU was increasing on an average of 5.5%, the average increase at the other regional institutions was nearly double that figure. The enrollment figures for the male student population indicated NSU's enrollment was slightly higher than the remaining regional institutions while the female population for NSU increased at almost a two to one margin over the remainder of the state.

The difference in Native American enrollments might seem meaningless, except NSU is located in the heart of Native America and historically has had one of the largest Native American enrollments in the nation.

Although NSU attracted the same student population on the whole, the sub-populations were undoubtedly impacted. These trends clearly indicate the increased

TABLE XI

A COMPARISON OF ENROLLMENTS OF OKLAHOMA'S REGIONAL
INSTITUTIONS AND NSU FOR 1986 THROUGH
1990 BY GENDER AND ETHNICITY

Fall Semesters	1986	1987	1988	1989	1990
Black					
Other Institutions					
Enrolled	3,477	3,58	3,703	3,656	3,700
Change		(+3.2%)	(+3.2%)	(-0.5%)	(+0.4%)
NSU					
Enrolled	437	383	379	357	360
Change		(-13.0%)	(-1.0%)	(-5.8%)	(+0.1%)
Native American					
Other Institutions					
Enrolled	1,685	1,813	2,008	2,231	2,423
Change		(+7.5%)	(+10.75%)	(+11.0%)	(+8.6%)
NSU					
Enrolled	1,218	1,245	1,107	1,062	(1,029)
Change		(+6.6%)	(+8.0%)	(+2.6%)	(+5.4%)
Males					
Other Institutions					
Enrolled	17,542	17,759	17,199	16,899	16,932
Change		(+1.0%)	(-3.0%)	(-1.7%)	(+0.2%)
NSU					
Enrolled	3,281	3,395	3,532	3,478	3,444
Change		(+3.4%)	(+4.0%)	(-1.5%)	(-1.0%)
Females					
Other Institutions					
Enrolled	20,807	21,332	22,115	21,994	20,904
Change		(+2.5%)	(+3.6%)	(-0.5%)	(-5.0%)
NSU					
Enrolled	4,865	5,019	5,185	5,232	5,397
Change		(+6.8%)	(+3.3%)	(+1.0%)	(+3.0%)

Source: OSRHE's Student Data Report, Oklahoma Higher Education 1991-1992

admission standards did have a negative influence on the Black and Native American student population while the male and female population was influenced very little.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Not all students who graduated from high school are adequately prepared to enter post-secondary education at the university level. Therefore, Northeastern State University (NSU), in an effort to maintain their level of quality education and simultaneously maximize their appropriated funding, limited enrollment through increased admission standards. This change of admission standards was based on the projected growth pattern of the university's population and the reduction in state financial assistance. In 1988 the NSU administration established education policies which permitted access for students who met minimum academic standards as a means to limit enrollment to no more than 1,000 first-time entering freshmen.

Population

The population for this investigation consisted of first-time entering freshmen at NSU in Tahlequah, Oklahoma. The research included all students applying for admission in the Fall of 1986, 1987, 1989, and 1990. The first-time freshmen admitted in 1988 were not included in this study because the admission standards were implemented on July 1, 1988. This allowed for some students to be admitted on the previous standards of an ACT composite score of 15, an overall grade point average of 2.7, or to be ranked scholastically in the upper two-thirds of their graduating class. In contrast the increased standards of an ACT composite of 18, an overall grade point

average of 3.0, or to be ranked in the upper fifty percent of their class was the standard used after July 1, 1988. In studying attrition, the population was limited to those students who were enrolled as first-time freshmen in the fall semesters of 1986, 1987, 1989, and 1990 and returned the ensuing semester.

The purpose of this study was to determine if there was a relation between (1) increased admission standards and the composition of the student body in reference to gender or race and (2) the average attrition rate two years before the increased admission standards compared to the rate two years after admissions standards had been in effect.

Data were obtained through official university records and z-scores for each sub-population was calculated. A test of reasonableness was defined as a level of difference of more than 0.5 standard deviations between z-scores. This level was used to test whether the level of maintenance of a proportionately diverse student body as prescribed by the Oklahoma State Regents for Higher Education had been sustained.

As explained in Chapter II, when tests are used for admission purposes there should be consideration in the prediction of performances for applicant subgroups. Those subgroups were identified as men, women, and ethnic groups (College Board, 1989). Complementing this study was the Ford Foundation's (1984) examination of the effects of rising admission standards and post-secondary enrollment. The primary concern was speculation that the increased admission standards would negatively affect minority student populations. The findings in Chapter IV supported this theory in the provision of a comprehensive view of changes in the composition of the student body in reference to Black students and males at Northeastern State University.

The data presented in Chapter IV exhibited a profile of the decreased attrition rate for first-time freshmen at NSU when compared to the increased admission standards. This fits with the literature reviewed in Chapter II such as Noel, Levitz, and Saluri (1988).

Findings

The following statements summarize the findings:

1. There is a relation between increased admission standards and the composition of the student body in reference to gender and race two years after the increased admission standards have been in effect when compared to the student body two years prior to increased admission standards.

2. The relation between admission standards and the composition of the student body in reference to Blacks, Whites and others, and males indicated a negative effect for these student populations.

3. The relation between admission standards and the composition of the student body in reference to Native American students and females demonstrated a positive effect on these student populations.

4. There is a relation between admission standards and the average attrition rate for the two years prior to increased admission standards when compared to the attrition two years following the increased admission standards.

Conclusions

The review of literature indicated concerns with regard to ACT scores and standardized testing. However, since the research shows the ACT scores have

increased, this would imply the increased admission standards did not influence the change in the student population.

It is very important to note that the data revealed the use of special or alternative admissions. This allowed more than one-third of the Black and Native American student population, who did not meet the increased admission standards, to be admitted. This creates a deception with the overall numbers with regard to the increased standards and minority admissions. However, with the use of special admissions, NSU did honor its commitment to maintain a diverse student population with regard to race.

NSU did implement mechanisms to neutralize the possibility of declined minority admissions with the creation of the Office of Multi-Cultural Services and the Heritage Scholarship (which required an ACT composite of 18 or grade point average of 3.0). The implementation of these two entities created a positive influence on the number of applications and admissions to NSU.

Also, the change in the Black and Native American student population for first-time freshmen and total enrollment as a whole does not mirror the student population in the remainder of the state. The positive factors relating to the Black and Native American student population was an increase in the average ACT composite scores. The increased in the ACT score could easily be attributed to the scholarship requirements.

The analysis of the data implied a negative influence and the related data indicated unsettling information with regard to the Black and Native American student population. Based on the findings and the research on the alternative explanations it is concluded the increased admission standards did impact the student body at NSU

specifically related to the Black and Native American student populations.

Recommendations

The racial make-up of the NSU student population is predominantly white with a large percentage of females. This combined with the apparent decrease in the number of Black students and male applicants points to a revision in recruitment of the specific student populations. The attitudes and activities must be progressive and visionary in order to bring the university a high quality, culturally diverse student population.

In addition, efforts to improve the pre-college schooling and academic achievement of Black and male students should be implemented as an early intervention in summer bridge programs such as the Federal Trio Programs providing a means of preparedness and acclimation to higher education.

Additional Studies

Most significant to this study would be the synthesis of special admissions and attrition rates. Special admissions is a distinctive means of admitting students who do not meet the minimum admission criteria. This was devised in 1988 by the OSRHE to ensure that talented students would not be excluded for higher education. The total number of students admitted under this criteria was not to exceed seven percent of the total student population. Since these students do not meet the minimum academic standards it would be an interesting investigation to determine the number of students who did not persist for the ensuing semester. At this time this information

has not been compiled by the institutions and is restricted from perusal by the Student Privacy Act.

In addition, a more detailed study to determine a cause-effect relationship between admission standards and minority admission rates is recommended. This study should be replicated to encompass other four year universities within Oklahoma or this region which are composed of a similar student body in regard to gender and ethnic status. Also important to investigate is the influence of the Enhanced ACT Assessment Test on the admissions of Black and male first-time freshmen.

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VITA 2

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Thesis: THE IMPACT OF INCREASED ADMISSION STANDARDS AT
NORTHEASTERN STATE UNIVERSITY ON THE STUDENT
POPULATION BY GENDER AND ETHNIC STATUS AND
STUDENT ATTRITION

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