

AN EVALUATION OF A UNIVERSITY MINORITY STUDENT
RETENTION PROGRAM

by

Shanette Marie Harris

Dissertation submitted to the Faculty of the
Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

Psychology

APPROVED:

R. A. Winett, Chairman

R. Jones

J. Finney

N. Hauenstein

R. Foti

M. Brown

July, 1989

Blacksburg, Virginia

AN EVALUATION OF A UNIVERSITY MINORITY STUDENT
RETENTION PROGRAM

by

Shanette Marie Harris

Committee Chairman: Richard A. Winett
Clinical Psychology

(ABSTRACT)

The present study evaluated the effectiveness of a program instituted at Virginia Polytechnic Institute and State University (VPI&SU) in 1984 to help Black students adjust academically to the university. This project focused on five categories of criteria according to which strengths and weaknesses of this program were evaluated. These included: (1) Effort, (2) Performance, (3) Adequacy of Performance, (4) Efficiency, and (5) Process. The five evaluative questions were assessed by conducting three within university comparisons and one between university comparison. The measures included retention rates, graduation rates, quality credit averages, program costs, and responses to the Student Satisfaction Questionnaire (SSQ) Perceived Changes Checklist (PCC), Program Effectiveness Questionnaire (PEQ), and the University Alienation Scale (Burbach, 1973).

The results indicated that V-TASP provided services to Black freshmen and sophomore students. The within university comparisons suggested that the services provided to black students

decreased alienation, meaninglessness, and powerlessness of participants as compared to nonparticipants. Qualitative measures suggested that the three components of V-TASP differentially affected program participants' reported alienation, meaninglessness and powerlessness. The students were also satisfied with the services received. The findings of the university comparisons across time were unclear, although the program may have had a positive impact upon students' grades and the percentage returning for the sophomore year. The results of the between university comparisons suggested that V-TASP was more effective in graduating participants, moderately effective in terms of costs per student and less effective for year to year retention than the two comparison programs. The overall pattern of results are discussed in terms of future evaluative studies, contextual variables, and limitations of the study.

ACKNOWLEDGEMENTS

This paper culminates many challenging years of effort and personal growth. Several people have directly and indirectly contributed to making the dream of an eleven year old child a rewarding reality.

The author wishes to express her sincerest appreciation to Dr. Richard Winett, her dissertation chairperson and teacher, for his patient guidance, encouragement, constructive criticism, and constant support during the four years. Without such understanding, this dissertation might never have evolved. The author would like to thank the following individuals from Virginia Polytechnic Institute and State University. Dr. Joyce Williams-Green made this investigation possible by welcoming the evaluation of her retention program.

and made the data collection possible by providing information relevant to the student population studied. The author would also like to thank , Forestry Department, Duke University for his assistance with the statistics and data analysis. The author is grateful to the program directors of the University Transition Program and Peer Advising Program. They increased her awareness of minority students' experiences on predominantly white campuses.

A special thank you to God for the determination, health, and strength provided to complete this journey; a much deserved thank you to her mother and family for instilling within her an optimistic

and aggressive approach towards life, and a thank you to for
assisting with the sometimes forgotten tasks of living.

TABLE OF CONTENTS

	Page
ABSTRACT	iii
ACKNOWLEDGEMENTS	v
LIST OF TABLES	ix
I. INTRODUCTION	1
Assumptions of the Study	1
Limitations of the Study	3
Definition of Terms	4
Purpose and Objectives	6
II. REVIEW OF LITERATURE	7
Introduction	7
Minorities and Higher Education	10
The Economic Value of Education	13
Equity and Retention Issues	15
Attrition	19
Minority Retention Programs	26
Early Program Types: Problems	27
Recent Programs	30
Program Evaluation	32
Types of Evaluation Research	33
Problems in Following the Scientific Method	35
Definitions, Steps, and Criteria in Evaluation	38
Academic Success Program (V-TASP)	44
Staff and Tasks	47
Program Components	48
Personal Involvement	52
III. STATEMENT OF THE PROBLEM	54
Hypotheses of the Study	57
IV. METHODS	61
I. <i>Within University Comparisons</i>	61
Study 1	63
Subjects	63
Selection of subjects	63
Procedure	70
Instruments	70
Design and data analysis	76
Results	76

Discussion	84
Study 2	88
Subjects	88
Instruments	88
Procedure	88
Results	89
Discussion	94
Study 3	96
Subjects	96
Data base and variables	96
Procedure and Results	96
Discussion	99
II. <i>Between University Comparisons</i>	100
Retention and Graduation	102
Subjects	102
Procedure and Data	102
Results	105
Discussion	108
Program Cost Analysis	109
Subjects	109
Procedure and Data	109
Results	111
Discussion	113
Adequacy of Performance	114
Subjects	114
Procedure and Data	114
Results	116
Discussion	118
Discussion of Between University Comparisons	120
V. GENERAL DISCUSSION	122
Limitations	125
Conclusions and Recommendations	128
APPENDIX	130
REFERENCES	156
VITA	163

LIST OF TABLES

Table	Page
1. Categories of Evaluation	43
2. Program Objectives and Program Components	51
3. Percent of Total Sample, Participants and Nonparticipants by Academic Level, Total Program, and Components	66
4. Number of First Time V-TASP Participants by Cohort Year (Year Entering the University) and by Enrollment Status During Selection of the Sample	68
5. Number of Black Nonparticipants Enrolled at VPI&SU by Cohort Year (Year Entering the University) During Sample Selection	69
6. Means and T-values for Participants and Nonparticipants on Two Alienation Subscales and Total Alienation by Program Components	79
7. Means and Standard Deviations for Participants and Nonparticipants on the Perceived Changes Checklist by Program Components	82
8. Means and Standard Deviations for Participants and Nonparticipants on the Program Effectiveness Questionnaire by Program Components	83
9. Satisfaction Ratings of the Total Program and Program Components	91
10. Mean Ratings of Participants Level of Satisfaction by Item of Scale Component and Total Program	92
11. Black Freshmen at VPI&SU Before and After V-TASP by Percent Enrolled, Overall Quality Average, and Enrolled Quality Credit Average in Fall of Sophomore Year	98
12. Universities by Black Freshmen Fall Enrollment	104
13. Retention and Graduation Patterns by Program and Cohort	

Year	107
14. Cost Per Student by Retention Program and Cohort Year	112
15. Average Return and Graduation Rates for Retention Programs by Cohort and Academic Year	117

CHAPTER I

INTRODUCTION

Assumptions of the Study

- I. Predominantly white universities and colleges are legally, ethically, and socially responsible for the education of qualified students regardless of ethnic background.
- II. Black students encounter greater academic and social difficulties than white students at predominantly white universities and black students at traditionally black universities.
- III. A college education in this society is associated with greater benefits and self-sufficiency for Black Americans than a high school education or less.
- IV. Program evaluation research outcomes can be employed to improve the probability of retention programs achieving their stated objectives, i. e., retaining students.
- V. The success or failure of a program can be evaluated in terms of five categories of effect: effort, performance, adequacy of performance, efficiency, and process (Suchman, 1976).
- VI. Subjects in this study responded to the assessment

instruments in an honest and objective manner.

Limitations of the Study

- I. The subject population was not representative of all minorities enrolled at predominantly white institutions and the findings should not be generalized to retention programs beyond those included in the study.

- II. Together, a time-series and static comparison control group design increase the likelihood that the research findings of evaluation research are representative of actual program effects. However, a design which allows for random assignment of subjects is more powerful.

- III. Some of the measures to be used in the study (e.g., checklists, open-ended questions) were based on self-report and are not free from sources of personal response bias.

- IV. Some of the measures to be used in the study (e.g., checklists) were developed by the investigator. As a result, the degree of test validity for the instruments was unknown.

Definition of Terms

Alienation:

A perception of meaninglessness, powerlessness, and social estrangement.

Cost-analysis:

A number of conceptual and operational principles used for evaluation and making decisions about cost data.

Cost-effectiveness:

The evaluation of alternatives according to both their costs and their effects with regard to producing some outcome or set of outcomes.

Cost-benefit:

The evaluation of alternatives according to a comparison of both their costs and benefits when each is measured in monetary terms.

Three-tier advising:

An advising system comprised of three levels of advisors: faculty, graduate students, and student peers.

Threats to external validity:

Problems involved with generalizing experimental results to other settings, versions of the treatment, and measures other than those included in the study.

Threats to internal validity:

Problems involved with attributing experimental results to the treatment rather than extraneous factors.

Purpose and Objectives

This study was designed to evaluate the effectiveness of the Virginia Tech Academic Success Program (V-TASP) which was instituted at Virginia Polytechnic Institute and State University to retain and graduate Black students. In this study, five criteria of success were considered: Effort, Performance, Adequacy of Performance, Efficiency, and Process. The data obtained included qualitative (e.g., participant and nonparticipant responses to questionnaires) and quantitative (e.g., retention rates, graduation rates, program costs, quality credit averages) information. The specific objectives of this study were:

1. To assess the program's impact upon participants.
2. To identify factors that made the program work or not work.
3. To determine the effectiveness of the program as compared to programs with similar objectives on the campuses of comparable universities.
4. To offer recommendations for improving the programs' probability of achieving its objectives in a more cost-efficient manner.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Minority groups now account for a large percentage of the United States population. For instance, in the Southwest minorities make up over a third of the population, including 45 percent of those under age 5 (Chronicle of Higher Education, 1987). It has been estimated that soon after the year 2000, minority-group members will become the majority of citizens under age 30 in the Southwest and a majority of the total population soon after. Yet, according to the Census Bureau (1984) 83 percent of the Anglo (non-Hispanic white) population aged 18 to 24 have completed high school, whereas 60 percent of Hispanics complete high school and 75 percent of blacks complete high school. A similar pattern is reflected in college enrollment. Sixty percent of Anglo-Americans aged 18 to 24 are enrolled in college compared to 18 percent of Hispanic Americans and 20 percent of Black Americans. In addition, far fewer minorities graduate from college than enter. The Institute for the Study of Educational Policy (1980) found that in 1974, 57 percent of white freshmen who entered college in 1971 were enrolled or had graduated compared to only 41 percent of the black freshmen. The two-year institution attrition rate reveals an identical trend (1973) with more than 50 percent of blacks withdrawing compared to 39 percent of whites

(Institute for the Study of Education Policy, 1980). Statistical percentages indicate significant differences between the education of minorities and majority members, and the trend seems to be continuing.

According to an investigation by the House Committee on Government Operations in 1985 and 1986 desegregation plans expired for institutions of higher learning at ten southern states despite a 1973 court order banning segregation. The states include: Florida, Arkansas, Delaware, Georgia, Missouri, North Carolina, South Carolina, Oklahoma, Virginia, and West Virginia. In 1969 and 1970, all ten states were found in violation of desegregation orders mandated by the Civil Rights Act. At this time, no compliance orders have been issued even though the Department of Education completed most of its investigation of the state schools two years ago (Chronicle of Higher Education, 1987). Such indicators point to the inability of postsecondary institutions to educate minority students in an egalitarian manner. Institutions must become more successful in attracting, retaining and graduating minorities in order to declare an egalitarian functioning educational system.

The implications of an educational system that fails to educate its members are broad. This problem is evidenced by a report of the Urban Leagues' (Williams, 1986) which compared the status of blacks and whites and found the following differences: Blacks in the U.S. have an unemployment rate of 15% compared to 6% for whites; Blacks have the highest poverty rate (36% approximately) although Blacks

account for only 15% of the population; Blacks have 56 cents to spend for every one dollar for white families; and Blacks depend on single mothers to head 37% of all black families. In addition, illiteracy which was once thought to be a concern for other less developed countries, is gaining attention in the United States. Local, state, and federal government officials have brought national attention to the indirect costs produced by the failure to properly educate Americans. The possible costs in terms of social service assistance, crime, and even prison reform may be much higher than the cost of promoting equity in educational institutions.

MINORITIES AND HIGHER EDUCATION

The period of the late sixties to the early seventies represented a pivotal point in the pattern of black admissions to higher education institutions. Enrollments at public black colleges have been declining since 1976 and 1978 at sixty-two private black institutions (National Center for Education Statistics (1984). According to the National Center for Education Statistics (1984), the nation's 105 traditionally black colleges enrolled 96 percent of all black students in 1960, whereas today's 102 largely black institutions enroll 19 percent of black college students. As black enrollment has increased at predominantly white institutions, the academic standing and attrition rates of these students have become significant concerns for university officials.

Several programs instituted by the federal government have contributed to an increase in the number of black students attending institutions of postsecondary education. For example, Head Start and Title I have assisted in bringing lower socioeconomic class children and minorities into public education. Upward Bound and Talent Search have assisted in recruiting and preparing minority students for college, and Basic Educational Opportunity grants and Direct Student loans have supported and sustained many economically disadvantaged students during their college years. All of these programs have contributed to changes in the college population.

The evaluation of enrollment patterns in postsecondary education between 1961 and 1982 (Clowes, Hinkle, and Smart, 1986) supports the view that the demographics of higher education are changing. These researchers addressed whether postsecondary education is performing an egalitarian social function and focused upon the rate at which graduating seniors enroll in higher education in the year following graduation. They analyzed Project Talent data on 1961 high school graduates and data from the National Longitudinal Study of the high school class of 1972 (NLS). They also included comparable data from the High School and Beyond (HSB) data set. These data allowed them to investigate and compare enrollment patterns at three types of postsecondary institutions in the Fall of 1961, 1972, and 1982. Their findings indicate that the overall enrollment rate of graduating high school seniors in postsecondary education by 1982 was 64.1 percent, which was well above the 58.9 percent level of 1961.

Male enrollment in four-year colleges and universities declined 11 percent from 1961 to 1982, whereas the enrollment rate of females increased 20 percent over this period in four-year institutions. Black students were found to show significant increases in enrollment patterns. Although there were no data for 1961 because Project Talent did not use race as a variable, black graduates in 1972 were more likely than whites to attend four-year colleges and universities. A similar pattern was found in 1982.

In contrast, Hispanics generally had participation rates midway between blacks and whites. Hispanics highest participation rates were

in two-year colleges and the lowest in other vocational-technical institutions. These researchers concluded, "Enrollment rates of blacks and Hispanics are increasing over time with both groups by 1982 matching or exceeding the enrollment rates of whites at four-year institutions. This is evidence of a solid egalitarian function provided by postsecondary education (p. 128)".

Black enrollment in higher education reached a high in 1980 at 1.1 million of a total of 11.8 million undergraduate and graduate students. By 1986, total enrollment in higher education increased to 12.5 million students, but the total number of black students had dropped by 30,000 from its peak in 1980 (The New York Times, 1989). The difference was in black male enrollment. United Negro College Fund data also show a decline in male enrollment from 45 percent of that population a few years ago, to 42 percent today. Even among the number of black males who did enroll, a large number failed to progress toward completion of their degrees (Gregg, 1989). The decrease in black male enrollment has been attributed to elementary school experiences, low self-esteem, economics, and socialization patterns. Whereas black male student enrollment has decreased, the number of black female students increased from 563,000 to 645,000 between 1976 and 1986 (New York Times, 1989).

A major difference between blacks and whites in college attendance appears to be related to differences in family socioeconomic status (Thomas, Alexander, and Eckland, 1977). Some studies have indicated that when account is taken of differences in

socioeconomic status, blacks have higher aspirations to attend college than do white students (Porter and Wilson, 1976). Thus, the increase in black attendance in institutions of higher education probably reflects the increase in the size of the black middle class as well as efforts made by colleges and universities to recruit more minority students and a reduction in the barriers that limit black access to higher education.

The Economic Value of Education

The economic value of higher education for blacks has been demonstrated in several studies, even when black students come from families of relatively low income. Epps (1972) summed up the situation fifteen years ago as follows:

"We already know that low-income students constitute an unusually large proportion of the total black college student population. Recent surveys report that more than half of black college students come from families with annual incomes of less than \$6,000.00. Only about 15 percent of white college students report such low family incomes... Recent census data indicate that in the last few years there has been a rapid increase in the returns blacks receive from investment in education. This increase is already being reflected in earning power. Unlike the situation of a few years ago, the gap between median black and white family incomes was smaller in 1968 for blacks with a year or more of college than it was for those with lesser amounts of education. The implication of this new trend is that the gap between blacks and whites will close most rapidly for those blacks who are fortunate enough to obtain one or more years of college education. Thus, it appears that the attainment of higher education will continue to be one of the most important requirements for occupational and economic success" (Epps, 1972, p. 102-103).

Epps' statement was made seventeen years ago, and higher education continues to be associated with advancement for Black Americans.

This is evidenced in a series of articles written about the New Black Middle Class reported in the Washington Post newspaper. Joel Garreau (1988) writes:

"Since the 1960's, black educational attainment has seen one of the steepest growth curves of any population group in American history. Only 38 percent of young adult blacks had a high school education in 1960. The figure had soared to 55 percent by 1970 and 75 percent by 1980. By 1986, it had reached 81 percent. Historically, education correlates with economic performance.

Successful blacks are the most forgotten group of Americans there are, and the most interesting," says Rutgers' Sternlieb. "The focus has been so much on the losers that the very people who have been able to come through have been ignored" (Garreau, 1988).

This change is reflected in the State of Georgia. For example, Black Atlantans have experienced more rapid growth in income and education levels than their counterparts in five other major U.S. cities. A study conducted by Lee (1987) reviewed U.S. Census Bureau statistics as far back as 1940 and compared black education, income and migration patterns in the eighteen county Atlanta area with those of Chicago, Detroit, New Orleans, New York, Washington, D.C., and the nation as a whole. He found that over a twenty-year period beginning in 1959, the percentage of black middle-class families increased more than threefold in Atlanta, and the median income of these families rose by 69 percent. The study shows that in 1960, the average black adult in Atlanta had less than seven years of schooling. By 1980, the

average black adult completed high school. This gain is higher than that achieved in any of the other five cities.

Equity and Retention Issues

The increase in minority enrollment appears to represent a significant movement toward equity in postsecondary education and the enrollment of black students in predominantly white universities has contributed to the young black middle class over the past twenty years. Blacks have entered fields previously closed to them and have advanced in several professional fields. However, intervening variables other than enrollment have a significant impact upon the percentage of minority students receiving a four-year college degree.

Since the U.S. Supreme Courts' Brown versus Board of Education's decision, the Office of Civil Rights (OCR) has required predominantly white universities to enroll additional ethnic minorities and historically Black universities to enroll white students because racially identifiable institutions are not in compliance with the law's requirements (Ayres, 1982). In spite of the increase of ethnic minority students, university officials have not prepared themselves sufficiently to deal with these students. This is especially true for black individuals. Even though predominantly white universities today compete heavily for ethnic minority students, they somehow fail to satisfy the needs of many of these students. As black enrollment has increased at these institutions, factors related to the failure or success

of students have become of particular concern for college administrators.

The academic performance and college experience of black students in predominantly white colleges are major areas researchers have investigated in an attempt to explain the discrepancy between enrollment rates and graduation rates of black students. It is difficult, however, to describe an academic environment for black students even within specific universities because students enter the setting with different backgrounds, levels of persistence, and determination. As a result, students react to the environment with varying degrees of debilitation or attainment. Poor high school preparation, academic skill deficiencies, poor study habits, low self-esteem, and uncertainties about their academic potential are only a few of the many differences students bring to universities that impact upon their academic adjustment and retention (Miller, 1981). Garcia and Presley (1981) identified ineffective study habits and attitudes, poor reading and comprehension abilities, high levels of trait and test anxiety, and nonassertiveness as factors related to the low academic performance by black students at predominantly white institutions. Lee (1982) noted that black students are hesitant to seek out traditional counseling and academic support services when they need help.

Nettles, Thoeny, and Gosman (1986) attempted to answer questions about the achievement and experiences of black and white college students by analyzing survey responses of over 4,000 students and 700 faculty from 30 colleges and universities. Chi square analyses

were used to compare black and white students on several categorical variables, and multivariate analyses of variance were used to make racial comparisons of groups of similar or related variables. Pearson Product Moment Correlation procedures and multiple regression analyses were used to illustrate relationships of variables to student performance. According to the correlation coefficients, students with high cumulative grade point averages had high high school averages, a low number of interfering problems while attending college (e.g., financial, social, psychological), high SAT scores, were younger, had good study habits and high academic integration, attended smaller universities, and were from high socioeconomic status backgrounds. For the most part, these predictors of cumulative grade point average were found to be equally effective predictors for black and white students.

However, four variables (SAT scores, student satisfaction, peer relationships, interfering problems) revealed significant interactions with race. Whereas all four variables were significant predictors of cumulative grade point average for both black and white students, the interactions indicated that SAT scores tend to overpredict black students' cumulative grade point averages. Student satisfaction, peer relationships, and interfering problems all had greater significance as predictors for black students than white students grades. The most important significant predictors to explain racial differences in college performance were type of high school preparation, majority/minority status in college, where the students live while attending college.

academic integration, feelings that the university is racially discriminatory, satisfaction with the university, interfering problems, and study habits. The researchers found no relationship between faculty attitudinal/behavioral characteristics and student attitudinal/behavioral characteristics and student cumulative grade point average.

Trippi and Baker (1989) identified contextual characteristics of the residence environment related to grade performance and persistence of black freshman. Their findings differed for males and females. For black males, the variables selected to reflect social environmental factors did not contribute to the prediction of their performance or persistence. The results indicated that personal attributes and precollege experiences were related to the achievement of black males much more than for black females. However roommate characteristics and racial composition of the residence hall were associated with the performance and persistence of black females.

Jones, Harris and Hauck (1971) attempted to determine whether black students attending predominantly white colleges attributed their academic difficulties to different sources and whether or not they perceived themselves as having a different set of problems than their black counterparts in predominantly black colleges. Subjects rated sources of academic problems on twelve scales: competition, communication problems, social life, family backing, financial problems, advisement and counseling, campus and social atmosphere, intellectual atmosphere, quality of instruction, high school

preparation, educational relevance, and study habits. An analysis of variance was used with each of the twelve questionnaire scales to identify significant sources of variance and their interactions. The results indicated that students at white schools rated competition with other students as a factor in their academic difficulties more frequently than students attending black schools. Black students in predominantly white schools also rated their high school preparation as less adequate than did students in predominantly black schools. Communication with instructors was rated significantly poorer by students in white colleges. The poorest rating was given by males in white colleges, whereas females attending black colleges reported fewer number of problems. Courses were rated significantly less relevant at white schools, and students in these environments rated the campus atmosphere as unfriendly, cold, and hostile. Differences were found between the groups on the adequacy of social life on the campuses, and students in black colleges rated the counseling and advising services as better planned and more effective than students rated services at white colleges. No differences were found for financial problems and study habits.

Attrition

Attrition rates for black students at elite universities are usually lower than those at less prestigious institutions. However, in a sample of students at the University of Michigan (public) and the University of Chicago (private), each reported black attrition rates of about 42

percent, a rate which exceeds the 37 percent college attrition rate for black students in less prestigious white institutions (National Advisory Committee on Black Higher Education and Universities, 1978).

According to Astin (1975), the higher attrition rate of blacks in white colleges as compared to the attrition rate of black students in black colleges can be attributed in part to the effect of attending a white university, rather than to differences in initial dropout-proneness between blacks in white colleges and blacks in black colleges. Other researchers have followed Astin's (1975) premise and investigated the environment and black students' perception of white college environments to determine if attrition is related to this variable. The results indicate that ethnic minority students in predominantly white universities experience an environment in sharp contrast to the previous social environment which makes it difficult for many to achieve, especially those from rural environments (Hedegard and Brown, 1969).

Hedegard and Brown (1969) also reported that ethnic minority students inherited a poor social life, few dating opportunities, and a constricted range of peers with whom to interact; therefore, these students suffer from isolation. However, Nettles and Johnson (1987) examined the relationship of student background characteristics, academic performance, residential status, and contact with faculty as well as institutional factors such as size of the university, selectivity, and the racial comparability of students' high school and college on student socialization in the college environment. Socialization was

defined as students' satisfaction with their institution, peer group relations, and academic integration in college. Among other findings, the results indicated that black males and females had the best peer group relations but the least satisfaction and the poorest academic integration.

Fleming (1980) carried out a cross-sectional study of freshman-senior differences in which the academic performance, vocational aspirations, cognitive growth, and competitive performance (in laboratory situations) of blacks in predominantly white universities and black universities were measured. She found that at the predominantly black universities, seniors compared to freshmen showed evidence of more satisfaction with their courses and teachers, more intellectual confidence and self-expressive abilities, better academic functioning, cognitive growth and ability to compete, especially in white work environments. Seniors in predominantly white universities showed better academic functioning than freshmen, but also showed decreases in cognitive skill and competitive performance, more unhappiness and identity disintegration. Fleming (1980) concludes that students are at a critical stage of psychological development during the college years and the educational environment strongly influences their socio-emotional welfare.

Pentages and Creedon (1978), in interpreting Astin's (1973) findings on college attrition rates, describe how higher attrition rates among certain ethnic minority groups disappear when academic preparation is controlled. However for other ethnic minority groups

attrition is due to some factor or factors other than inadequate academic preparation. Alienation felt by black students is one factor which may lead to poor performance and high attrition.

Suen (1983) examined the relationship between alienation and attrition among black students within a predominantly white university environment. The University Alienation Scale, which measures three distinct dimensions of alienation: meaninglessness, powerlessness, and social estrangement, was used to measure the alienation of these students. Meaninglessness is defined as a sense of loss of direction as to one's purpose in a university. Powerlessness is a feeling of lack of control over one's own life in the university, and social estrangement is the feeling of loneliness. The attrition rate was monitored for three consecutive semesters by inspecting enrollment rosters for each semester. Students in the sample, not in the third semester roster and not graduated, were operationally defined as having dropped out of the university. Students' grade point averages at the end of the second semester were used as an indicator of their academic performance. The results indicated that black students scored higher than white students on all dimensions of alienation as well as the total scale. A Chi square test of independence showed that black students had a higher attrition rate than their white counterparts. Overall, the correlations between alienation and attrition were higher among black students than they were among white students. Attrition was directly related to all alienation scores and inversely related to grade point average among black students.

The correlation coefficients between meaningfulness and attrition, between the total score and attrition and between grade point average and attrition were statistically significant. Among white students, alienation scores were not significantly related to attrition, but grade point average was inversely related to attrition. Analyses of covariance results indicated that when grade point was the covariate, the total alienation score and all subscale score differences between dropouts and continuing white students were not statistically significant. The differences, however, were significant among black students in total alienation and meaningfulness after the grade point differences were accounted for. Black students dropped out at a rate of 48 percent, whereas white students dropped at a rate of 20 percent. Thus, dropout behavior for white students is usually related to academic variables but dropout behavior among black students may be due to feelings of social estrangement, meaningfulness, and powerlessness, as well as academic factors.

Noncognitive factors have been shown to be as important or more important to academic success for minorities than traditional academic dimensions (Tracey and Sedlacek, 1985). Sedlacek and Brooks (1976) proposed seven noncognitive variables that are related to academic success: positive self-concept, realistic self-appraisal, understanding of and an ability to deal with racism, preference for long-term goals, availability of a support person, successful leadership experience, and demonstrated community service. To further support this view, Loo and Rolison (1986) found that both minority

and white students believed that minorities faced greater sociocultural difficulties on campus than white students. Two major reasons for this finding were given: the dominance of middle-class values on campus and ethnic isolation resulting from being a small proportion of the student body.

Hughes (1987) carried out a phenomenological study of black students enrolled at 13 universities in the South and East (2 predominantly black, 11 predominantly white universities) to assess their intrapsychic and interpersonal adjustment on predominantly white and black campuses. Fifty black women and twenty-nine black men responded to an open-ended questionnaire in which they were asked to provide subjective reports about their college experience. The questionnaires were followed by telephone interviews. Results of thematic analysis suggested that black students who attend predominantly white universities must be self-starters who are independent and capable of coping with stereotypes, fears, alienation, and loneliness. Black males and females reported deferring social, personal, emotional, and cultural development until graduation. In contrast, black students attending predominantly Black universities reported greater happiness. Fleming (1983) proposed that racial prejudice on white campuses prevents minority students from participating in the social life where opportunities for more informal types of learning occur. This limited access adversely affects students' lives and contributes to lower academic performance. Turner (1985)

attributes some of the difficulties experienced by black students on predominantly white campuses to the resurgence of overt racism.

A great number of minorities enroll in predominantly white colleges and universities and never receive a college degree, yet education has been shown to correlate highly with economic advancement. Perceived alienation, institutional racism, poor study habits, and lack of social support are only a few of the several factors that increase the likelihood that many minority freshmen will not receive an advanced degree.

MINORITY RETENTION PROGRAMS

Many predominantly white universities and colleges have attempted to accommodate black populations by developing and implementing Educational Opportunity Programs or Support Services Programs, special admission policies, Multicultural Centers, and Black Studies Programs. However, these services have historically met with great opposition. Professors, theorists, and political officials have challenged the value of programs designed for Black students. For example, Spiro Agnew proposed that the traditional higher education system had benefited students and that black students would not gain academically if they were allowed to attend predominantly white universities by nontraditional standards (Ballard, 1973).

This theme was promoted further in Logan Wilson's address to the American Council on Education, in which he compared the "egalitarian" system of admission to universities to the "meritocratic" system of admission. His speech emphasized the worth of a meritocratic system:

"Impacts of the educational process are judged most immediately, of course, by fairly standardized procedures of testing, grading, and certifying. Although these routinized tests of human worth have long been criticized, it has been generally conceded that in an open society evaluation of individuals based primarily on what they know and can do is more equitable and certainly more functional than assigning status according to "who they are". In sum, whatever its defects, the meritocratic principle in higher education does have the virtue of emphasizing achieved rather than ascribed status". (Wilson, 1970, P. 29-30).

Other challenges to the egalitarian system were presented by academic scholars. Professor Julian C. Stanley (1971), proposed that it was unfair and unethical to admit students into institutions of higher education when standardized test scores predicted they would be unable to successfully compete with other students. Arthur Jensen's (1969) work, which proposed that Black Americans are genetically inferior to American whites in mental capacity, also added to the controversy surrounding compensatory education programs.

Early Program Types: Problems

However in spite of the controversy which surrounded this issue of black enrollment, between 1966 and 1970, Educational Opportunity Programs (E.O.P.) began to appear on campuses throughout the country (Ballfard, 1973). As educational opportunities began, many of such programs were not constructed to give the entering black students an actual chance at academic success. Some colleges created six-week compensatory summer curricula and had students carry a full load of college courses. It was assumed that a six-week course would decrease the previous academic deprivation of these students. However college preparatory courses were not implemented at all institutions. In some instances, students with low reading levels were placed into regular courses such as Economics I, History I, and Chemistry I, and given tutorial assistance. While in other colleges, students entering with major deficits in mathematics courses were offered matriculated status. Many of the programs or departments of

compensatory education were not designed and implemented on the basis of long-range planning. As a result, some services were offered in basements, temporary buildings, or off-campus. Such programs may have contributed to negative as well as positive outcomes by indirectly impacting upon students' self-esteem.

Another way in which colleges and universities have tried to make higher education more relevant for minority students and more responsive to the needs of minority communities and populations has been to initiate programs in "Black Studies" or in "Ethnic" or "Multicultural" Studies involving the participation of other racial and ethnic groups. Black studies programs vary from two or three elective course, such as "Afro-American Literature", "Sociology of Minority Communities", and "Black History in the United States", to a full major of 30 to 40 units out of a total of approximately 120 units needed for a bachelor's degree. Among other purposes, courses in black or other ethnic studies generally are designed to help increase the understanding of minority students, and develop commitment to reducing the disadvantages of racial and ethnic minority populations. At least one or two such elective courses are offered at most sizeable colleges and universities.

From the beginning of the black studies movement, concern was expressed about the quality of courses, the qualifications of the instructors, and the performance of the students. However, proponents were able to meet these charges head-on. Nathan Hare,

the temporary chairman of the Department of Black Studies at San Francisco State College stated:

"Far from restricting black students (even more) to the study of their culture alone--and hence, further crippling them in acquiring the skills needed to overcome (or overthrow as may be their pleasure) their handicaps in a technological society--the major motivation of black studies is to entice black students (conditioned to exclusion) to greater involvement in the educational process. Black studies is, above all, a pedagogical device. That is why we have courses in black mathematics, black science, black radio and television, etc. this fall at San Francisco State. We intend to solve the problem of a black shortage in technical scientific fields, not to aggravate it" (Hare, 1969, p. 30).

Relaxed admissions requirements have also expanded opportunities for black and other minority students in higher education, and these changes appear to have had some success in making a college education and credentials accessible to a larger number of disadvantaged minorities. "Affirmative Action" to accomplish these goals in recruiting faculty and students has been required by the federal government and also has been adopted voluntarily in a variety of forms intended to increase minority enrollment in many graduate and professional schools. One approach which has been used to increase minority enrollment at some institutions has been to set a quota for minority students, frequently about ten percent of enrollment. Other approaches involve awarding points toward admission to applicants from racially and economically disadvantaged backgrounds or requiring lower aptitude scores from minority candidates in recognition of research indicating that aptitude

tests may be culturally biased and are not as predictive of success for minority as for nonminority students (Havighurst & Levine, 1979).

Recent Programs

Multicultural Centers established on predominantly white university campuses have been helpful in meeting the unique needs of ethnic minority students. Many universities already have such programs implemented due to the increased enrollment of ethnic minority students in the sixties and seventies. By establishing Multicultural Services Centers it is assumed that the universities can more effectively and proactively address the problems of cultural isolation and institutional dissatisfaction that might aid in increasing minority enrollment and retention. In addition, it is assumed that effective role models will be more accessible and minority students more easily and effectively mainstreamed into the university community. Some individuals propose that catering to the unique cultural needs of minority students will revert to segregation instead of mainstreaming. Supporters of mainstreaming suggest that it is in the best interest of the student not to be treated separately from the majority. Rather, all efforts for ethnic minorities should address the academic, social, and personal needs of all students. Supporters of separate programs for ethnic minority students suggest that these students have unique needs that most university programs and services designed for all students are not adequately equipped to address (Woods, 1987). Many universities have adopted both

approaches because they have found that ethnic minority students can best be served through a combination of approaches.

Additional support services such as study skills, mentor programs, and peer counseling have been utilized to increase academic performance and persistence of black students. Peer counseling has received the most attention from researchers as a viable support program. Peer counseling is a direct development of the paraprofessional movement and has been used in a variety of educational settings: in elementary schools (Rockwell and Dustin, 1979); middle schools (Grady, 1980); and high schools (Cutchins, 1977). At the university level, peer counselors have been employed to improve the grades of high-risk students and educate students in various areas. Programs that have multiple components (e.g., study skills, planning, self-monitoring, etc.) have also been shown to be effective for this population.

The history of ethnic minority students on predominantly white campuses suggest that for these students, the skills of learning, surviving, and coping should not be left to chance. Moreover, predominantly white campuses have an obligation to maintain a policy of nondiscrimination and take corrective actions to insure cultural and ethnic diversity among students, faculty, administration, and staff. Thus, particular programs need to be designed and implemented. But, moreover, such programs must be carefully evaluated to assess their effectiveness.

PROGRAM EVALUATION

Connecting behavioral change with a set of services is a complicated and arduous process. However program directors must examine their services to make sure the daily operation of the program, short-term effects, and the overall outcome is consistent with stated objectives. Campbell (1969) emphasized the importance of evaluating social programs from an experimental perspective almost twenty years ago. Yet, most directors have failed to evaluate programs according to the criteria associated with the experimental method, despite evidence suggesting that social concerns can be addressed with this approach.

In addition, the old perception of social problems, i.e., The Black Problem, are starting to be viewed as affecting society in general. For example, the fact that a larger percentage of minorities than nonminorities do not receive an education is not a "minority concern" but a "social concern". Thus, institutions as well as individuals share responsibility for the problems that exist, and change from both levels offer greater hope for combating social problems than either level alone.

The fact that the old views of social problems are changing, coupled with the many requests for funds and resulting competition with other agencies, as well as justification of new programs has pushed evaluative research to the forefront. Yet, most evaluative studies do not provide interpretable results. The inability of

administrators to utilize the results from such studies is at least partly attributable to the distinction made between evaluation research and basic research. Because distinctions made between the two point to conceptual differences, it has been assumed that methodology must also be different.

Types of Evaluation Research

Evaluation research and basic research have been represented by some individuals as quite different. Wrightstone (1969) suggests that the latter is more concerned with basic theory and design of a program over an appropriate time period, with flexible deadlines, and sophisticated treatment of data. On the other hand, he views evaluation as concerned with basic theory and design but having a main function of appraising a practical activity to meet a deadline. Cherns (1969) distinguishes between the two in terms of diffusion and generality of results. He proposes that basic research has greater potential for generality and limited potential for immediate utilization, whereas evaluative research has limited potential for generality, but much potential for immediate utilization.

Some classify evaluation as a form of research. For those who follow this line of reasoning, the scientific method is essential for evaluative studies. For example, Suchman (1976) proposes that the difference between basic research and evaluative research is one of purpose rather than method. That is, basic research applies scientific principles to problems of theoretical significance, whereas evaluative

research applies scientific principles to problems with administrative consequences. According to Suchman (1976), evaluative research represents an attempt to utilize the scientific method for the purpose of assessing the value of an activity. Because some individuals insist upon making a sharp distinction between basic research and evaluative research it is important to understand exactly how they can differ.

In the ideal experiment or true experiment associated with basic research, a sample of subjects is chosen randomly from a population. These subjects are then assigned on a random basis to one of two conditions, condition A or condition B. The experimenter then exposes Group A to the experimental treatment. The situation is identical for Group B, except that the group is not exposed to the experimental treatment. Under ideal conditions, Group A and B are identical at the outset, and remain so, except for the exposure to the treatment. Following the experimental treatment, measurements are taken on the variable in which the experimenter is interested and which is expected to change as a result of the experimental treatment. After the measurements are completed, some descriptive statistics based on the individual measurements (e.g., means, standard deviations, etc.) are calculated for each group, and the probability that the groups differ is evaluated by some statistic such as the t test. If the mean values of the groups differ significantly more than would be expected by chance, the experimenter concludes that the experimental condition has had a significant effect on the variable measured.

These "ideal" criteria are difficult to satisfy. In fact, there are probably very few experiments that satisfy all the criteria, especially when carrying out an evaluation study. The primary objective of basic research is the discovery of knowledge, to prove or disprove a hypothesis. Unlike evaluative research, no administrative action is contemplated or followed. However evaluative research is generally applied with an objective of determining the extent to which a given program is achieving some desired goals. As a result, the success of the evaluation study is often dependent upon how useful it is to the administrator in improving services. Thus, both administrative and scientific criteria determine the value of the study. The practical problems of adhering to scientific principles in the face of administrative issues make evaluative studies more difficult to conduct than basic research studies.

Problems in Following the Scientific Method

Campbell (1969) provides several possible reasons for administrators' inclination to omit scientific principles in the process of evaluating social programs. First, administrators strive to avoid negative feedback if their program does not meet the proposed objectives. As a result of this tendency to avoid criticism, administrators may choose to evaluate only the objectives that are likely to represent a favorable outcome. In addition, the data required for an evaluation based upon the scientific method can also be used to describe the actions and management of the administrator. Further, it is difficult to

acknowledge problems associated with a program that one has supported. Such advocacy sets up strong systems of denial and hinders experimental evaluation.

The model described previously represents the ideal experimental design from which all adaptations must be derived. No matter what approach is used or what concessions have to be made because of administrative or other limitations, the basic logic of proof is traceable to this model. However, there is a set of experimental designs, and there is no best way to design all evaluative studies. When the logic of laboratory experimentation is generalized to natural environments, it is important to understand the potential threats to the validity (internal and external) of the study. Campbell and Stanley (1963) delineate nine classes of extraneous variables relevant to internal validity that may produce effects likely to confound with the experimental effects if they are not controlled. These include: history, maturation, testing, instrumentation, statistical regression, selection, experimental mortality, selection-maturation interaction, and instability. History refers to the time span between measurements. During this time, in addition to the experimental treatment (program), a great many things can happen that may have an effect on the later measurement. Maturation refers to effects that are specific to the passage of time and are not a function of specific events, as in history. The experience of being tested may also result in a change in the measurement being taken. For example, a person

given the same intelligence test twice will almost certainly show a higher score on the second testing.

Campbell defines the distinction between reactive measures, measures that change the variable one is studying, and non-reactive measures, those that have no effect. Variation stemming from instrumentation refers to a change in the measuring apparatus (e.g., scales, ratings by judges, etc.). Regression refers to the tendency for individuals having extreme scores (either high or low) on the variable being measured (e.g., SAT scores) the first time to have scores closer to the average of the groups on a second measurement. Selection biases result from recruiting subjects in different ways. Dissimilar ways of selecting subjects may lead to different means when the experimental effects are measured. Mortality is used by Campbell to refer to the loss of subjects in the sample being studied from the time of the first measurement to the second. Selection-maturation interaction refers to biases of selection that result in different rates of maturation or change. Finally, instability refers to the unreliability of measures. If an experiment lacks internal validity, external validity is by definition nonexistent. However, if the results are attributable to the program then questions regarding generalizability of the results are asked.

Threats to external validity include the problems involved with generalizing the results to other settings, other versions of the treatment, or measures of the effects (Campbell, 1969). Campbell describes six threats to external validity including: interaction effects

of testing, interaction of selection and experimental treatment, reactive effects of experimental arrangements, multiple-treatment interference, irrelevant responsiveness of measures, and irrelevant replicability of treatments. These threats are referred to as interaction effects involving the treatment and other variables. For example, a pretest on math may increase or decrease an individual's responsiveness to a particular experimental variable (e.g., math class). The interaction of selection and experimental treatment means that generalizations of the results can only be made to the population from which the sample was selected. The reactive effects of experimental arrangements prevent generalization to groups that were not in the experimental setting or similar artificial conditions. Multiple-treatment interference refers to effects not typical of the separate administration of the treatments. Irrelevant responsiveness of measures refers to an inability to generalize results because the irrelevant components of the measures may produce effects. Irrelevant replicability of treatments refers to the inability to generalize because replications of the treatment may not include the ingredients responsible for the effects. These threats to external validity serve as rules to guide the selection of research designs for evaluation studies.

Definition, Steps, and Criteria in Evaluation Research

In the literature the definitions of the term "evaluation" are inconsistent. They tend to focus on either a conceptual or operational

description. The conceptual definitions describe evaluation in terms of a cognitive and affective process. The operational definitions concentrate upon the purposes of evaluation and the procedures involved in conducting an evaluation study.

Rutman (1977) defines evaluation as "a process of applying scientific procedures to accumulate reliable and valid evidence on the manner and extent to which specified activities produce particular effects or outcomes". Weiss (1972) states that the purpose of evaluation is to "measure the effects of a program against the goals it set out to accomplish as a means of contributing to subsequent decision making about the program and improving future programming".

Deutscher (1977) defines evaluation as "determining the consequences of deliberate efforts to alter ongoing processes and understanding the process which leads to the new consequence (p. 221)".

These definitions show some inconsistencies, but taken together they point to essential steps required for evaluation as outlined by Suchman (1976): 1) Identification of goals to be evaluated; 2) Analysis of the problem with which the activity must cope; 3) Description and standardization of the activity; 4) Measurement of the degree of change that takes place; 5) Determination of whether the observed change is due to the activity or to some other cause; and 6) Some indication of the durability of the effects. These conditions place evaluation within the area of scientific research.

Evaluative research can be conducted in terms of different categories of effect. These categories represent the criteria for determining success or failure according to which a program can be evaluated. These criteria also assist in defining the type of measure to be employed in judging the program. Suchman (1976) proposes five categories of criteria according to which the success or failure of a program may be evaluated. These are: 1) Effort; 2) Performance; 3) Adequacy of Performance; 4) Efficiency; and 5) Process. Evaluations in the category of Effort are intended to answer the questions, "What did you do?" and "How well did you do it?" The criterion of success is the quantity and quality of activity that takes place. This category is an assessment of input or energy regardless of output. Although effort evaluation does not provide major answers, it does indicate that something is being done in an attempt to correct a problem. An example of effort evaluation is indicated by counting minority student visits to their advisors.

Performance or effect criteria measure the results of effort rather than effort itself. This category attempts to answer the questions, "Did any change occur?" "Was the change the one intended?" "How much is accomplished relative to the goal?" Performance can be measured at several levels (e.g., the number of students retained, the number of students with grade point averages above a 2.0, or the number of students qualified to graduate according to the Registrar's Office). The Adequacy of Performance criterion of success refers to the degree to which effective performance is adequate to the total amount of need.

For example, a tutoring program for a small group of students failing math may show highly effective results, but as a retention measure prove inadequate to meet the problem of poor grades in math in an entire university. One usual index of adequacy consists of measuring the impact of a program in terms of the rate of effectiveness multiplied by the number of people receiving services from the program. Thus, if a program is 50 percent effective and 1000 students receive the services it will be felt by 500 students. However, a program which can be applied to 10,000 students and is only 10 percent effective will have an impact on 1000 students.

Efficiency is concerned with the evaluation of alternative methods in terms of costs in money, time, personnel, and participant convenience. This criterion of success attempts to answer the question, "Is there any better way to attain the same results?" Both costs and effects must be considered to make appropriate decisions about social programs. Levin (1983) discusses four cost-analysis approaches including: cost-effectiveness, cost-benefit, cost-utility, and cost-feasibility. Cost-effective analysis refers to the evaluation of alternatives according to both their costs and their effects with regard to producing some outcomes or set of outcomes. Cost-effective analysis assumes that programs with similar or identical goals can be compared, and a common measure of effectiveness can be used to assess them. Cost-benefit analysis refers to the evaluation of alternatives according to a comparison of costs and benefits measured in monetary terms.

In order for a program to be selected, the benefits must outweigh the costs. That is, to be selected from among the alternatives, the program would have to show a higher ratio of benefits to costs. The primary disadvantage of cost-benefit analysis is the task of assigning monetary value to the costs and results of alternatives. Cost-utility analysis refers to the evaluation of alternatives according to a comparison of their costs and estimated utility or value of their outcomes. For example, is it more important for minority students to graduate, transfer, or leave school to work? Cost-feasibility, unlike cost-effectiveness, or cost-utility estimates only the costs of an alternative in order to determine its worth. If the cost exceeds the available funds, no other analysis is required.

Finally, process as a criterion of program success deals with how and why a program works or does not work. This criterion helps to lend meaning to the evaluation results by establishing a connection between what was done and the results obtained. Suchman (1976) provides four main dimensions according to which this analysis of Process can be made: 1) the attributes of the program itself (e.g., advising, tutoring); 2) the population exposed to the program (e.g., which are most affected, whom does it really reach); 3) the context within which the program takes place (e.g., locale, timing); and 4) the different kinds of effects produced by the program (e.g., unitary or multiple, unintentional or side-effects, duration of effects and type of effect (e.g., cognitive, attitudinal, behavioral) (see Table 1).

Table 1

CATEGORIES OF EVALUATION

Category	Variable Definition	Example
Effort	Answers, "What did you do? and "How well did you do it?"	The number of letters each advisor wrote to their students per week.
Performance	How much is accomplished relative to an immediate goal	The number of students remaining at the end of a year.
Adequacy of Performance	The degree to which effective performance is adequate to the total amount of need	Measure the impact of program by multiplying rate of effectiveness by number of students.
Efficiency	Is there any better way to attain the same results?	Could V-TASP have achieved the same result more efficiently?
Process	How and why a program works?	Only one component is responsible.

VIRGINIA TECH ACADEMIC SUCCESS PROGRAM (V-TASP)

Virginia Polytechnic Institute and State University is a selective four-year land-grant university located in the mountains of southwest Virginia. There are eight doctorate-granting colleges and a College of Veterinary Medicine. The undergraduate students are primarily Virginia residents and residential.

Until 1984, Virginia Tech did not have a formal retention program. A 1984 grant proposal was founded by the State Council of Higher Education for the Virginia Tech Academic Survival Program. In 1986 the name was changed from Virginia Tech Academic Survival Program to Virginia Tech Academic Success Program as a result of information from student participants indicating dissatisfaction with the former title. Although the program was welcomed by the university, it was not willing to enroll students who had little chance of matriculating at the university. It was concluded that to bring a less prepared student into the university environment would be unfair to the entering student. As a result, the purpose of V-TASP is to accelerate the academic acclimation of high-risk students and enhance accurate placement in classes. The program includes students of all races but tends to be predominantly black according to its original goal.

The Virginia Tech Academic Success Program was originally designed for black freshmen at the university after reviewing university enrollment data. Although the attrition rate and graduation rate of Virginia Tech students in comparison to National data showed

that Virginia Tech's ability to retain and graduate students was well above national figures, the difference between the retention and graduation rates of black and white students nationally was also evident at Virginia Tech. For example, a 1986 study of graduation rates of black, white, and other students of Virginia Tech showed that of the 4,028 freshmen who entered the university during fall of 1980, 64.5% of all students, 65.5% of white students and 42.9% of black students graduate in five years (Williams-Green, 1986).

V-TASP was originally designed for black students but started to enroll high-risk white, first time freshmen (SAT average 825) during the second year of the program (1985-1986). In the fall of 1984, the Virginia Tech Academic Success Program was initiated at Virginia Tech in order to increase the recruitment and increase the retention rate of black students by providing coordinated systematic student course placement, enhancing problem solving and study skills, intensifying academic advising, and enhancing parents' and counselors' awareness of academic support programs aimed at improving black students' success at Virginia Tech.

Specifically, the objectives of this program are as follows:

- a). Assess the academic skills level of black students.
- b). Prevent the placement of black students in courses that are beyond their skills level.

- c). Train academic special advisors, assigned graduate students, and peer advisors in advising for special students.
- d). Monitor black students' academic performance throughout each academic term.
- e). Help black students (and others) develop appropriate study skills.
- f). Provide personal counseling (career directions, dropping courses, reading courses, etc.).
- g). Enhance reasoning and learning skills needed for academic progress. (See Table 2)

The objectives of V-TASP are consistent with the achievement factors outlined by Noel, Levitz, Salurie and Associates (1985). These factors include: diagnostic testing of student skills, offering courses and curricula consistent with students' diagnosed skills, and comprehensive educational planning and academic advising. The comprehensive retention efforts of the Virginia Tech Academic Success Program at Virginia Polytechnic Institute and State University attempted to address each of these factors. V-TASP makes sure that the enrollment behavior of students is consistent with the diagnosed

reinforces academic skills and confidence of students identified as high-risk. Traditional academic advising and the three-tier advising program involve faculty and administrators in the retention activities of the university. Student participation in help activities and the average course load of no more than sixteen hours per quarter are designed to be evident of good advising and administration participation.

Staff and Tasks

V-TASP personnel include the Assistant Provost; a full Professor in the College of Education; Associate and/or Assistant Deans from seven colleges; a counselor; nine graduate assistants; and student peer tutors. The Assistant Provost is responsible for directing the program. This responsibility includes such duties as interviewing and hiring potential staff, meeting with staff to discuss program issues, and delegating responsibilities. The Associate and/or Assistant Deans are responsible for supervising the work of the graduate advisors assigned to their respective departments. This supervision includes making certain that the graduate advisors contact all V-TASP students and provide the correct information to students relating to courses and grades. The faculty members are responsible for advising the students when the graduate advisor does not know the academic information necessary to answer a question and contacting them when the students' grades drop below the required average. The counselor is responsible for assisting the students with signing up for tutorial

sessions, study skills classes, and assistance with personal concerns. In addition, the counselor is responsible for supervising the peer advisors' contact with the program participants.

The graduate assistants are responsible for maintaining a close relationship with their assigned students to make sure they are aware of the college course requirements, financial aid services, drop/add schedule, registration process, summer school options, and any other related issues. They maintain records on each student and monitor the information given to students. Finally, the peer advisors are responsible for visiting the students and serving as an experienced friend by providing information about campus living, similar courses they have taken, and the opportunity to discuss any personal problems that the students feel comfortable in discussing.

Program Components

The Virginia Tech Academic Success Program is comprised of four primary components: preassessment testing, a three-tier advising system, study skills and counseling services, and the Advanced Study Skills and Reasoning class. Preassessment testing is carried out during the fall before students actually begin classes. When the program was first implemented in 1984, the McGraw Hill Math Test and parts of the Stanford Reading Diagnostic Test were administered to students selected by invitation to participate in the program. In 1985, preassessment testing was changed to include only the McGraw Hill Math Test, because there was no way to incorporate the test

results from the Stanford Reading Diagnostic Test in the advising process. The advising system is mandatory and involves volunteer faculty advisors, graduate student advisors, and peer student advisors. One graduate advisor and two peer advisors are assigned to the faculty advisors in each college.

All advisors (faculty, graduate, and peer) participate in a fall information workshop. Demographics of the entering class are given during the workshop. Faculty and graduate advisors are also given the reading test scores of each student in their respective colleges. The test information enables the advisors to change the placement of the students and the combination of reading courses if test scores indicate possible problems. The advisors are provided with forms to log student consultations and attempted contacts. The workshop also includes presentations about academic support activities (e.g., writing lab, career placement, study skills, counseling, tutoring, college advisors, Advanced Study Skills and Reasoning class, etc.). Each advisor is requested to recommend that all V-TASP students enroll in no more than sixteen hour per quarter.

The records of each V-TASP student are also reviewed during the second summer session to determine if the student has preregistered for a mathematics class that reflects his or her SAT score. If it appears that students are enrolled in the incorrect class, they are contacted and placed in an appropriate class prior to fall orientation. The black freshmen enrolled in each college are contacted by all three advisors before, during, and after each quarter. The students are

advised to make regular visits to their course advisors and special advisors. Students are also told to enroll in one of the regular or special study skills sessions offered by the Counseling Center. All V-TASP students are encouraged to schedule regular weekly sessions with the tutors in the Counseling Center.

The Advanced Study Skills and Reasoning class is divided into two components. The first component involves students participating two days per week in intensive training and practice of study and thinking skills. The second component of the course involves students working on competency enhancement one day per week using individualized learning systems (microcomputer courseware programs organized for each student). Problem-solving and reasoning skills are also addressed by means of training and practice in word processing and BASIC programming.

Table 2

PROGRAM OBJECTIVES AND PROGRAM COMPONENTS

Objectives	Components
To assess the academic skills of students	Diagnostic testing of student skills (Preassessment Testing)
To prevent the placement of students in courses beyond their skill levels	Graduate advising (to make sure students are in curricula consistent with skills=no more than 16 hrs per quarter permitted)
Train academic special advisors	Fall information workshop; monthly meetings
Monitor student academic performance throughout each academic term	Graduate advising
Help students develop appropriate study skills	Study skills
Provide personal counseling	Counseling services
Enhance reasoning and learning skills	Advanced study skills and reasoning course
Reinforce academic skills and confidence of students	Advanced study skills and reasoning course; Study skills; Counseling; Graduate advising
Involve faculty and administration in retention activities	Faculty advisors; graduate advisors in various colleges

Personal Involvement

Between March 1986 and June 1987, I was employed with the Virginia Tech Academic Success Program (V-TASP) as a graduate advisor in the College of Business. Two advisors worked in the College of Arts and Sciences and one advisor worked in each of the following Colleges: College of Engineering, College of Architecture, College of Education, and Counseling Center.

The twenty-hour assistantship was funded through the Provost's Office under the direction of Dr. Joyce Williams-Green, Assistant Provost. The position placed primary emphasis on the V-TASP responsibilities but secondarily focused on advising any freshman and sophomore in the College. The major items of my V-TASP advisors position were as follows:

- 1). Participate in orientation and testing of V-TASP freshmen in the Fall and other quarters, as scheduled.
- 2). Monitor the academic progress of all black and target white freshmen by telephone, letter, and in-person appointments with written records of each advising session.
- 3). Refer students to appropriate faculty and support services especially for those in academic difficulty.

Other responsibilities associated with the position included:

- 1). Completion of evaluations for all internal transfers to College of Business and assisted with applications for upper-division clearance.
- 2). During drop-add periods, served as terminal operator.
- 3). Compiled special reports for the office. Routine ones included reports on change of major process, follow-up on superior student matriculation, and follow-up on dropped students.
- 4). Followed quarterly report cards, contacted and subsequently met with students in warning status.

CHAPTER III

STATEMENT OF THE PROBLEM

In summary, theoretical and practical considerations suggest that minority students in predominantly white university settings experience difficulties that contribute to high attrition rates. As a result of policy changes in the sixties and seventies and changes in the percentage of Black and Hispanic American college-age students in predominantly white institutions, programs have been designed to combat the negative experiences of minorities with the expectation of increasing graduation rates (Fleming, 1980; Fleming, 1981; Fleming, 1983; Keller, Piotrowski & Sherry, 1982; Loo & Rolison, 1986; Miller, 1981; Nettles, Thoeny & Gosman, 1986; Smith, 1981; Suen, 1983). Researchers have investigated the academic and social college experiences of minority students in order to increase the retention and graduation rates of these students on predominantly white university campuses. However, they have failed to focus upon existing services. That is, administrators and researchers often assume that minority retention programs are effective in accomplishing set objectives and take few, if any, measures to determine whether the programs, in fact, retain students and increase graduation rates. As a result, it is difficult to gauge the worth of such programs.

However the federal government, private sponsors, and participants have come to expect an accounting of program

achievements. Programs that provide social and educational services to students are generally costly in terms of money and personnel. Thus, administrators of these programs have the responsibility to account for their success or failure from an ethical standpoint, i.e., to make sure that the outcomes are of a positive, rather than negative nature, as well as from a financial perspective. This accounting is especially important at this time when funding for such programs is unstable from year to year.

Most administrators, however, do not evaluate the costs involved in the implementation and maintenance of programs as related to their expected effects, i.e., minority retention. Yet, an analysis of the costs involved with program implementation and maintenance can assist administrators in selecting among alternative programs. Such a selection process is necessary, because several programs exist with the proposed goal to increase minority retention and increase the rate of graduation. Unlike standard evaluation which asks, "Does it work?", cost analyses accounts for both the costs and effects of selecting one program over another (Levin, 1983). This investigation is an attempt to add to the literature on program evaluation in the area of higher education for minorities and to provide a broader perspective from which to approach this growing social concern for government officials and college administrators as the number of college-aged minorities in this country continue to increase across all socioeconomic levels.

This perspective involves evaluating all educational programs in a timely and scientific manner in order to determine which programs are to be funded and employing planned evaluation as a major criterion for continued and even first time program funding. Several retention programs exist, and others are developed annually from intuition and theory, yet program evaluation is the final step in the planning process. A broader perspective of program implementation and maintenance views evaluation as intertwined with the development of any program, rather than the final process.

In the steadily increasing competition for public funds among all public services, evaluation of social programs is coming more and more to dominate the funding considerations. Education, specifically postsecondary education, is one of the services that requires attention. Since the sixties, federal funds have been channeled in large quantities into higher education. At this time, however, it is necessary to analyze the value of programs designed to provide ethnic minorities with a quality education similar to other Americans. The steadily increasing number of minorities and the economic plight that the majority of these individuals experience is the primary need to employ experimental evaluation. Education is most often the path out of poverty for minorities in this country; yet a great number of minorities enroll in colleges and universities and never receive a college degree. Education is one area in which the cycle of generations of poverty can be broken, and the evaluation of the worth of the programs assisting in

this struggle is essential to the development and implementation of programs that effectively recruit, retain, and graduate students.

The simple declarations by program administrators that these programs work are no longer acceptable. Few evaluation studies are carried out and those that exist are generally of low quality. The overwhelming proportion of established programs are not based upon evaluative results and do not provide for an evaluation of their effectiveness. In addition, most new programs fail to include a plan for evaluation in their development. It is important that scientific procedures are applied to investigate program process and outcomes once a program is judged to be evaluable.

Similar to basic research, evaluative research must begin with a statement of the relationship hypothesized between the program and the desired effects. To verify this hypothesis requires the design of a research project which shows that the desired objectives were more likely to occur in the presence of the program being evaluated than in its absence.

Hypotheses

However, in practice the application of the scientific method to natural settings is a task complicated by technical issues and social pressures as discussed earlier. In program evaluation research the investigator usually cannot exert control over the subjects and their group assignment or the administration of the program to certain groups. The investigator must work within administrative constraints.

Research designs where the investigator is unable to exert the control required of "true experiments" are referred to as "quasi-experimental designs" (Campbell & Stanley, 1963). In contrast, the strength of a "true experiment" comes from the investigators' ability to control what treatment is administered to whom and when it is administered. Such experiments also allow for subjects to be randomly assigned to treatment conditions which rules out other rival explanations of the results.

As a result of the inability of quasi-experimental designs to control for some rival hypotheses, program evaluation must include a conception of programs that differs somewhat from that of true experiments. For example, most programs have complex treatments and several groups can be exposed to different elements of the program and the effects of the individual components assessed, rather than adhere to the idea of comparing a treatment group to a no-treatment control group. Comparisons between programs in different settings may also provide valuable information to the understanding of a program's impact. In addition, the perceptions of individuals who receive services of the program can add to the evaluative results. The observation that designs used to evaluate social programs differ from those employed to understand basic research questions suggests that a program evaluation study should incorporate as many types of design and forms of measurement as possible to gauge the worth of a program. Several designs and measures which point to related findings about a particular program may yield more conclusive results.

Based upon this rationale, the following study employed evaluative criteria proposed by Suchman (1976) as a model to guide the evaluation of the Virginia Tech Academic Success Program (V-TASP). Prior to conducting other investigations, the effort criterion which answers the question "What was done?" was assessed by interviewing staff, administrators, and program participants. The findings presented in the Appendix confirmed that V-TASP staff provided services to black freshmen and sophomores aimed at increasing retention and graduation rates. Four criteria including performance, adequacy of performance, process, and efficiency were used to evaluate the effort of V-TASP staff and administrators. These four criteria were assessed by using within university comparisons and between university comparisons. The following hypotheses were tested:

Within University Comparisons

Study 1

- 1) The alienation, meaninglessness, and powerlessness experienced by V-TASP participants will be less than that experienced by students who were asked to participate but refused the offer (nonparticipants).
- 2) V-TASP participants will perceive greater behavioral and cognitive changes than nonparticipants.
- 3) Seniors who participated in V-TASP will report greater

long-term social and academic changes than seniors who did not participate in V-TASP.

Study 2

- 1) V-TASP participants will report satisfaction with the services of the total program and the individual program components.

Study 3

- 1) There will be a difference in black student grades and the number of black students retained at VPI&SU after the implementation of V-TASP as compared to the grades and number of students retained before V-TASP was implemented.

Between University Comparisons

Study 1

- 1) V-TASP participants will have a higher year-to-year return rate and graduation rate than participants of comparison universities.
- 2) V-TASP will be as cost-effective or more cost-effective than retention programs at similar institutions.
- 3) The effects of V-TASP will be more adequate to meet the total amount of program participants' need than the effects of comparison programs.

CHAPTER IV

METHODS

Within University Comparisons

The within university evaluation provided an empirical basis for investigating the Virginia Tech Academic Success Program (V-TASP) within the environment of Virginia Polytechnic Institute & State University (VPI&SU). This type of evaluation allowed for the investigation of different outcome questions, such as the effects of the total program, analysis of the various components of the program, and the impact of the program upon students. In these three studies, the Virginia Tech Academic Success Program was evaluated according to process and performance criteria.

In Study 1, process was assessed by comparing program participants and nonparticipants to determine how and why the program works (i.e., meets stated minor and major objectives) or does not work by examining possible differential effects of the program for student participants. Study 2 was conducted to examine program participants' degree of satisfaction with V-TASP and each of its components. In Study 3, performance was assessed by comparing black students enrolled at the university in their second year before V-

TASP was instituted (1978-1983) with black students enrolled in their second year after the program was instituted (1984-1988).

Study 1

V-TASP Participants and Nonparticipants

Subjects

The total subject sample consisted of 114 black students enrolled at VPI&SU in the Winter quarter of 1987, who expressed willingness to participate in the study. This sample included 61 program participants and 53 nonparticipants. The percentage of the total sample, participants, and nonparticipants is presented in Table 3 according to academic level at the time of the study and program components of V-TASP. As shown in Table 3, N sizes for nonparticipants vary for the four groups because nonparticipants used program services with the exception of those listed in the Total Program condition. This is explained further in the Data Analysis and Design section.

Selection of subjects

Program participants were selected by obtaining a list of students participating in V-TASP for each cohort year since the program was implemented in the Fall of 1984. This list was provided by the research analyst employed with V-TASP. The specific cohorts included first-time (i.e., freshman) participants for 1984-85; 1985-86; 1986-87; and 1987-88. All students on this list and enrolled at the university during the Winter quarter of 1987 were contacted by telephone to request their participation in the study. Table 4 represents the status of the total sample by presenting the number of

first time program participants for each of the four academic years since the program was instituted in 1984; the number of participants not enrolled at VPI&SU during the data collection period (i.e. Winter quarter 1987); the actual number of students contacted by telephone; and the number of students who participated in the study after telephone contact. This information is categorized according to the academic year in which the students first entered the university. For example, in 1984-85, 51 black freshman participated in V-TASP. Of these fifty-one, 27 were not registered in school during the Winter quarter of 1987 and were therefore not contacted to participate in the study. Twenty-four of the 51 participants, were contacted by telephone and 16 participants actually completed the assessment packet. As shown in Table 4, the N sizes of participants assessed for 1986-87 and 1987-88 are a smaller percentage of the number of participants contacted than those assessed from the students contacted for 1984-85 and 1985-86. The reasons for this discrepancy are unclear. However it is possible that the lack of an incentive for participating in the study resulted in decreased N sizes for these cohorts. Freshmen and sophomores may also have been less interested in providing feedback about the program than more advanced students (i.e. juniors and seniors). In addition, freshmen and sophomore students may have felt unable to provide information about V-TASP because they were less familiar with the services than juniors and seniors.

The sample of nonparticipants was obtained by systematically sampling the undergraduate black student population enrolled at VPI&SU minus program participants in the Winter of 1987. A profile of black undergraduate students enrolled at the university and arranged according to telephone number, address, and year entering the university was provided by Mr. Glenn Valentine of the Office of Admissions. Every 5th student for each of the four cohort years (1984-85; 1985-86; 1986-87; and 1987-88) was contacted by telephone to request their participation in the study. In Table 5 the number of enrolled black students who did not participate in V-TASP are presented by the year they entered the university. This table also categorizes nonparticipants by the number contacted by telephone and the actual number who participated in the study.

During the telephone call, participants and nonparticipants were informed that their responses were confidential and would be used to provide feedback to the administrators of a retention program on campus. All students were informed of the date, time, and location to complete the assessment materials.

Table 3
 Percent of Total Sample, Participants and Nonparticipants
 By Academic Level
 Total Program and Components

Academic Year	Total Sample		Participants		*Nonparticipants	
Total Program	N	%	N	%	N	%
Freshman	18	35	2	4	16	31
Sophomore	11	21	5	10	6	11
Junior	12	23	5	10	7	13
Senior	11	21	4	7	7	14
	52	100%	16	31	36	69
Academic Year	Total Sample		Participants		**Nonparticipants	
Contact with Advisors	N	%	N	%	N	%
Freshman	43	38	14	12	29	26
Sophomore	30	26	15	13	15	13
Junior	18	16	7	6	11	10
Senior	23	20	11	10	12	10
Total	114	100%	47	41%	67	59%
Academic Year	Total Sample		Participants		***Nonparticipants	
Counseling Services	N	%	N	%	N	%
Freshman	42	37	13	11	29	26
Sophomore	30	27	20	18	10	9
Junior	18	16	8	7	10	9
Senior	23	20	10	9	13	11
Total	113	100%	51	45%	62	55%
Academic Year	Total Sample		Participants		****Nonparticipants	
Study Skills Course	N	%	N	%	N	%
Freshman	42	37	13	11	29	26
Sophomore	30	27	8	8	22	19
Junior	18	16	9	8	9	8
Senior	23	20	6	5	17	15
Total	113	100%	36	32%	77	68%

Table 3
Continued

Note: *Nonparticipants refer to students who did not receive assistance from either component.
Participants refer to students who received assistance from all three components.

**Nonparticipants refer to students who did not participate in the advising component but may have used services of counseling, the study skills course, both components or no services.
Participants refer to students who definitely used the advising services but may have used other services as well.

***Nonparticipants refer to students who did not use counseling services but may have used the advising services, study skills service, both services, or no services.
Participants refer to students who definitely used counseling services but may have used other services as well.

****Nonparticipants refer to students who did not use the advanced study skills service but may have used the counseling service, advising service, both services, or no service.
Participants refer to students who definitely used the advanced study skills service but may have used other services as well.

Table 4

Number of First Time V-TASP Participants
By Cohort Year (Year Entering the University) and
By Enrollment Status During Selection of the Sample

YEAR	1984/85	1985/86	1986/87	1987/88
V-TASP participants	51	75	54	104
Participants not Enrolled	27	34	0	2
Participants Contacted	24	41	54	102
Participants Assessed	16	11	4	30

Table 5
 Number of Black Nonparticipants Enrolled at VPI&SU
 By Cohort Year (Year Entering the University) During Sample
 Selection

YEAR	1984/85	1985/86	1986/87	1987/88
Nonparticipants Enrolled According to the Profile	118	133	106	236
Nonparticipants Contacted	24	26	21	47
Nonparticipants Assessed	12	10	10	21

Procedure

Two 2-hour meetings were held for students to complete an assessment packet containing several paper-and-pencil measures. Freshmen, sophomores, and juniors attending either meeting were given a packet containing an informed consent form and the instruments described below. Seniors were given an additional questionnaire also described below. To ensure confidentiality and candid responses, subjects were asked not to write their names on any of the questionnaires. Assessment packets were collected after students completed the questionnaires.

Instruments

The Student Satisfaction Questionnaire (SSQ); Perceived Changes Checklist (PCC); and Program Effectiveness Questionnaire (PEQ) were developed for the purpose of this study. The instruments were developed in four stages.

First, an attempt was made to formulate questions that assessed demographic status, general characteristics of the students, students' participation in the program components and their perceptions of each component. Also obtained were students' assessment of their academic and social progress at VPI&SU. The items were generated by following the goals and objectives of the overall program and the specific components (e.g., Advanced learning and study skills course). The items resulting from this process were evaluated further by Dr. Robert Frary of the Tests and Measurements division of the Learning

Resources Center at VPI&SU on two separate occasions. Dr. Frary provided feedback on the scale format (e.g., 7-point versus 5-point scale), types of items (e.g., open-ended versus close-ended), and approaches to analyzing the results. The third step involved the administration of these items to five black undergraduate students (two males and three females) to obtain feedback (e.g., clarity of questions, differences in interpretation of items, time required to respond to questionnaires) to be used in the revision of the measures. Finally, reliability coefficients were computed using the Cronbach's alpha formula for the current sample to gain an index of the internal consistency for the three inventories after removing all open-ended questions.

The assessment packet contained the following measures:

Student Satisfaction Questionnaire (SSQ) A variety of satisfaction questionnaires exist but most are designed for programs other than specific university retention programs and for individuals other than the population studied. This measure reflects the Virginia Tech Academic Success Program's operation and objectives. The scale is comprised of 61 structured questions ranging from 1 to 5 on a Likert scale and 3 open-ended questions. This self-report measure includes three sections: (a) specific student characteristics, (b) descriptive features of the program, and (c) perceived academic and social standing at the university. The alpha coefficient was computed for this

sample on the SSQ after removing the 3 open-ended questions and was found to be $r=.97$ for the total scale; $r=.91$ for the scale assessing satisfaction with graduate advising; $r=.92$ for counseling services; and $r=.97$ for the advanced study skills course. Examples of some of the items assessing students degree of satisfaction with features of the program include: "Do you feel that V-TASP services help you?", "Have you made friends with students who participate in V-TASP?", and "Do you feel that the people who work with V-TASP understand your feelings?" High scores on this section of the measure reflected dissatisfaction with program services.

Perceived Changes Checklist (PCC) Students' views of changes in their academic and social functioning as well as adjustment to the university system was one of the objectives of the Virginia Tech Academic Success Program, and it was decided that information on this level of functioning should be assessed. This scale consists of 18 standard items on a Likert-type scale from 1 to 5. The alpha coefficient was found to be $r=.85$ for this sample. High scores on the PCC reflected the absence of perceived changes in behavior or thoughts.

Program Effectiveness Questionnaire (PEQ) Programs may have a temporary effect upon individuals' behavior, but the long-term effects are sometimes more questionable. This particular measure was administered to senior participants and nonparticipants to determine

if students perceived any long-range benefits from having participated in V-TASP. The 24 items on this Likert scale include such variables as grades, study time, reading skills, and friendships. The alpha coefficient computed for the current sample on this measure was found to be $r=.81$. High scores on the PEQ reflected little or no perceived remaining changes in behaviors or thoughts since freshman and sophomore year.

University Alienation Scale (UAS) (Burbach, 1972) This measure was used to assess the degree of students' alienation, powerlessness and meaninglessness. This scale was developed by rewriting selected items from context free alienation scales so as to include the university as the referent and by formulating original items based on the theoretical delineation of the components. Nine powerlessness, eight meaninglessness, and seven social estrangement items were formulated and randomly assigned a position in the scale.

Powerlessness is a feeling of lack of control over one's own life in the university. Meaninglessness is defined as a sense of loss of direction as to one's purpose in a university. Social estrangement is the feeling of loneliness. The response set consists of a five choice, agree-disagree Likert-type continuum, on which subjects are asked to indicate the degree of agreement or disagreement with each statement. Each item is scored on a 1 to 5 basis, with 1 being assigned to the least alienated response and 5 to the most alienated.

The total score for each individual is obtained by totaling the item scores.

Results of factor analysis indicated that the grouping around the three factors of the scale were cohesive enough to lead to a three-dimensional interpretation. Correlations among the three factors (Factors I & II, $r=.69$; Factors II & III, $r=.56$; Factors I & III, $r=.68$), on the other hand, indicated that the relationships were strong enough to consider the existence of a generalized factor of alienation. The highest loadings on Factor I were produced by the items designed to measure meaninglessness. Powerlessness items generated their highest loadings on Factor II and social estrangement items loaded more heavily on Factor III than on the other two factors.

Burbach (1972) reported split-half reliabilities of .92 for the total scale, .79 for the Powerlessness subscale, .89 for the meaninglessness subscale, and .72 for the social estrangement subscale. Item analysis results showed that all items correlated significantly ($p<.01$) with the total scale. Reliability coefficients were computed for the current sample using the Cronbach's alpha formula, such that $r=.76$ for alienation, $r=.63$ for the powerlessness subscale, and $r=.75$ for the meaninglessness subscale. The social estrangement subscale was not used in this study because the alpha coefficient computed for this sample was extremely low ($r=.10$). According to Ary, Jacobs, and Razavieh (1985), a lower reliability coefficient (.30 to .50) may be acceptable for research purposes, but only the highest reliability is acceptable if the results are to be used for making decisions. The

decision not to use the social estrangement subscale was based upon the fact that results of the present evaluation might be used by administrators to make decisions about V-TASP. In addition, the reliability of this measure did not seem to be as high as the reliability of similar measures (i.e., powerlessness, meaninglessness) for the current sample (Ary, Jacobs & Razavieh, 1985). This scale has been used by other researchers (Astin, 1977; Cortina, 1980; Suen, 1983) as a measure of university alienation experienced by college students.

Design and Data Analysis

Students were categorized as participants and nonparticipants based upon their responses to items which assessed participation in each program component. For example, students who indicated participating in the advanced study skills course were classified as participants and those who indicated a lack of participation were classified as nonparticipants for this component. This method of categorizing students as participants and nonparticipants was used for each component. Participation in the three components was categorized as total program participation. The scores of participants and nonparticipants on the University Alienation Scale (UAS), Program Effectiveness Questionnaire (PEQ), and Perceived Changes Checklist (PCC) were analyzed by employing t tests to determine if overall differences existed between the groups (i.e., participants and nonparticipants) on each measure.

Results

Hypothesis 1

The first hypothesis that program participants would experience less alienation than nonparticipants was tested by using t tests to compare the mean scores of the groups on measures of alienation, meaninglessness, and powerlessness. The means and t-values for the groups' scores on meaninglessness, powerlessness and

alienation are reported in Table 6 according to each program component.

These data indicated significant differences for nonparticipants and participants on the meaninglessness subscale for the advising component of V-TASP ($t=2.11$, $df=111$, $p<.05$). Differences were not found between the groups on the meaninglessness subscale for the counseling component ($p=.46$), advanced learning and study skills course component ($p=.11$) and total program ($p=.14$).

Significant differences were found between participants and nonparticipants on the powerlessness subscale for the advanced study skills course component ($t=2.26$, $df=110$, $p<.05$). Marginal differences were found on the powerlessness subscale for the total program ($p=.08$) and counseling component ($p=.09$). However no differences were found on the powerlessness subscale for the advising component ($p=.35$).

Significant differences were also found between the groups on alienation for the advanced study skills course component ($t=1.82$, $df=110$, $p<.05$). No differences were found between the groups on alienation for the total program ($p=.12$), the advising component ($p=.18$) or the counseling services component ($p=.25$).

Hypothesis 2

The second hypothesis that V-TASP participants perceive greater behavioral and cognitive changes than nonparticipants was tested by

using t tests to compare the mean scores of the groups on the Perceived Changes Checklist (PCC). The means and standard deviations for the groups' scores on the PCC are reported by each program component in Table 7.

Significant differences were found between the groups on the PCC for the advising component ($t=2.97$, $df=76$, $p<.01$) and advanced study skills course component ($t=2.49$, $df=76$, $p<.01$). Marginal differences were found between participants and nonparticipants on the PCC for the total program ($p=.09$). Significant differences were not found between the groups' scores on the PCC for the counseling services component ($p=.57$).

Table 6

**Means and T-values for Participants and Nonparticipants
on Two Alienation Subscales and Total Alienation
by Program Components**

Total program						
a						
Participants			b			
Nonparticipants						
Subscales and Total	SD	Means	SD	Means	t-value	p
Meaninglessness	3.99	22.53	5.35	24.27	1.10	0.14
Powerlessness	3.22	20.66	5.15	22.72	1.40	0.08
Total Alienation	4.83	61.86	11.3	65.51	1.18	0.12

Contact with advisors						
a						
Participants			b			
Nonparticipants						
Subscales and Total	SD	Means	SD	Means	t-value	p
Meaninglessness	4.24	22.53	5.49	24.56	2.11	0.02*
Powerlessness	4.32	21.91	4.70	22.25	0.40	0.35
Total Alienation	8.69	64.12	10.7	65.83	0.90	0.19

Counseling Services						
a						
Participants			b			
Nonparticipants						
Subscales and Total	SD	Means	SD	Means	t-value	p
Meaninglessness	4.74	23.76	5.44	23.67	0.10	0.46
Powerlessness	4.45	21.49	4.61	22.63	1.33	0.09
Total Alienation	8.78	64.45	10.9	65.72	.670	0.25

Table 6
Continued

Advanced Study Skills Course						
			a		b	
			Participants		Nonparticipants	
Subscales and Total	SD	Means	SD	Means	t-value	p
Meaninglessness	4.41	22.83	5.39	24.10	1.23	0.11
Powerlessness	3.49	20.72	4.86	22.77	2.26	0.01**
Total Alienation	7.49	62.66	10.8	66.3	11.82	0.04***

Note: a b *Significant at .05 level.

n=36 n=76

Note: p-value based on one-tailed test.

Hypothesis 3

The third hypothesis that seniors who participated in V-TASP would perceive greater long-term social and academic changes than seniors who did not participate in the program was also tested by using t tests to compare the two groups. As presented in Table 8, the results yielded a significant difference between the groups on the Program Effectiveness Questionnaire (PEQ) for the advising component ($t=1.864$, $df=17$, $p<.05$), counseling component ($t=2.17$, $df=17$, $p<.05$) and the total program ($t=2.90$, $df=7$, $p<.05$). The data did not indicate a significant difference between participants and nonparticipants on the PEQ for the advanced study skills course component ($p=.10$).

Table 7

Means and Standard Deviations for Participants and Nonparticipants
on the Perceived Changes Checklist (PCC) by Program Components

Component	a		b		t	p
	Participants	Nonparticipants	Participants	Nonparticipants		
	M	SD	M	SD		
Total program	62.31	5.00	66.34	11.6	1.32	p=.09 (M)
Advising	38.88	11.7	47.56	13.4	2.97	p<.01*
Counseling	42.78	14.0	44.51	13.0	.558	p=.29
Course	38.74	12.2	46.45	13.3	2.49	p<.01**

Note: p-value based upon one-tailed test

Note: *p=.003, df=76; a n=34 b n=44

**p=.01, df=76; a n=27 b n=51

p=.09, df=49; a n=16 b n=35

Table 8

Means and Standard Deviations for Participants and Nonparticipants on the Program Effectiveness Questionnaire by Program Component

Component	a		b		t	p
	Participants	Nonparticipants	Participants	Nonparticipants		
	M	SD	M	SD		
Total program	59.50	7.047	77.00	10.19	2.90	p<.05*
Advising	63.00	14.31	73.55	9.593	1.86	p<.05**
Counseling	61.00	11.08	73.09	12.53	2.17	p<.05***
Course	62.16	7.026	70.69	14.61	1.34	p=.10

Note: *p=.01, df=7; a n=4 b n=5
 **p=.04, df=17; a n=10 b n=9
 ***p=.02, df=17; a n=8 b n=11

Note: p-value based on one-tailed test.

Discussion

The first hypothesis of Study 1 that V-TASP participants experience less alienation, meaninglessness, and powerlessness than nonparticipants was partially supported. Student participants of V-TASP reported fewer feelings of meaninglessness and powerlessness than students who did not participate in the program.

An analysis of the relationship between program components and feelings of alienation, meaninglessness, and powerlessness appears to suggest that students visiting the graduate advising component report fewer feelings of meaninglessness than students who do not use this service ($p < .05$). Students who attended the advanced study skills course reported fewer feelings of powerlessness than students who did not attend the course ($p < .05$). Students who attended the advanced study skills course also reported less alienation than students who did not attend the course, although this finding was not statistically significant ($p = .09$). However, using the services offered by the counseling center did not seem to significantly influence students' feelings of meaninglessness ($p = .40$), powerlessness ($p = .09$) or alienation ($p = .25$). The total program did not significantly impact upon participants' feelings of alienation ($p = .12$), meaninglessness ($p = .14$), and powerlessness ($p = .08$).

The components of V-TASP seemed to differentially affect students' feelings of meaninglessness, powerlessness, and alienation. The findings suggest that the advanced study skills course serves as a greater buffer for feelings of alienation than the advising or counseling

component. The advanced study skills course also seems to decrease feelings of powerlessness and meaninglessness. It is likely that attending a structured learning situation provides students with a feeling of mastery and a sense of control over the university environment. The act of attending the course as well as acquiring skills taught in the course may replace feelings of helplessness with behavioral, cognitive, and emotional ways of coping. Contact with advisors appears to decrease participants' feelings of loss of direction and purpose in the university. Interactions with advisors may give students concrete academic plans to follow which assist in structuring their perceptions of the university in a more manageable form.

The second hypothesis that participants would perceive greater behavioral and cognitive changes than nonparticipants was partially supported by t test results. Students who attended the advanced study skills course ($p < .01$) and those who visited the advisors ($p < .01$) reported more changes on these dimensions than students who did not use V-TASP services. Attending the counseling center did not differentiate between students who participated in the program and those who did not participate ($p = .57$). However if students used all program services, the differences between students who participated in the program and those who did not participate approached significance ($p = .09$).

The third hypothesis that seniors who participated in V-TASP would perceive greater long-term social and academic changes than seniors who did not participate in the program was supported. The

findings of the t tests indicated that V-TASP participants who attended the counseling center ($p < .05$), advising component ($p < .05$), and total program ($p < .05$) reported more social and academic changes than students who did not participate in the program. However there were no differences between the groups on the course (p.44).

The main conclusions derived from the analyses were: a) the program components seemed to decrease students' feelings of alienation, meaninglessness, and powerlessness; b) the individual program components had different influences upon meaninglessness, powerlessness, and alienation; c) participants reported more changes in behaviors and thoughts associated with college (i.e., academic and social; d) seniors who participated in the program as freshmen and sophomores reported more changes in behavior than students who did not participate in the program; and e) the impact of counseling differed for upperclassmen and underclassmen. The finding that attending the counseling center did not have an impact upon alienation, meaninglessness, powerlessness, and perceptions of cognitive and behavioral change is consistent with previous researchers who generally found that the provision of counseling services may not be an effective strategy for some college students (Garni, 1980; Herr, 1985). In addition, Cheatham, Shelton, and Ray (1987) reported that among black students most help-seeking is for academic counseling. This finding is also consistent with research indicating that counseling services may interact with student academic level and result in different outcomes (Giddan, Levy, Estroff,

Cline, Altman, Isham & Weiss, 1987). However these results must be interpreted with caution because upperclassmen may have reported differences for reasons other than using services of the counseling center such as self-selection (i.e., staying in school).

These data support the data that students who use services designed to improve adjustment to predominantly white campuses with goals of retention and graduation may benefit in emotional and behavioral ways. The findings also suggest that the effects of retention programs may be mediated by various program characteristics (i.e., type of services offered) and student characteristics (e.g., academic level).

Study 2

Subjects

Subjects were program participants (N=78) enrolled at VPI&SU in the Winter quarter of 1987 who volunteered to complete a satisfaction inventory that was included as part of a retention program evaluation. All subjects were selected as described in Study 1. Program participants were defined as all students who had contact with at least one program component (i.e., advising, advanced study skills course, counseling).

Instrument

The Student Satisfaction Questionnaire (SSQ), designed to assess degree of satisfaction with the total program and specific program components was developed by the primary author and used to assess students' degree of satisfaction with V-TASP. This self-report measure was described in Study 1.

Procedure

The Student Satisfaction Questionnaire (SSQ) was administered to the participants of V-TASP (1984-1988) as part of a packet containing the measures described in Study 1. All students were informed that they could not be identified and were instructed to respond to all inventory statements. All of the questionnaires were completed and collected. Analysis of the respondents' academic level indicated that all levels of academic classification were represented in the sample.

Results

The Student Satisfaction Questionnaire (SSQ) and the three subscales were administered to program participants to determine their degree of satisfaction with the total program and the advising, counseling services, and advanced study skills course components. Tables 9 and 10 present the distribution of ratings given by the respondents for each component. The satisfaction ratings of the total program and components are shown in Table 9 with the percentage of respondents giving each rating. In Table 10 the means of the satisfaction ratings given by the respondents for each item are presented.

As presented in Table 9, the majority of the respondents rated each component and the total program within the moderate satisfaction to slight dissatisfaction range. Two of the three components received ratings indicating dissatisfaction with the program services: Contact with advisors (4% of the respondents) and the advanced study skills course (10% of the respondents). The total program and the three components also received ratings indicating high satisfaction (a combined total of 12%).

The item with the highest mean rating assessed the advising services of V-TASP and evaluated the comfort students experienced during visits with the advisors. The three items that received the relatively lowest mean ratings (4.12, 4.46, and 4.63) between "slightly dissatisfied and dissatisfied" are presented in Table 10 and include:

students ability to discuss social and interpersonal concerns with advisors, comfort level at the counseling center, and the ability to apply information learned in the advanced study skills course to other courses. It should be noted that the majority of the 25 items had mean ratings between "moderately satisfied and slightly dissatisfied".

Table 9

Satisfaction Ratings of the Total Program and Program Components

Percentage of Respondents Giving Each Rating

Components & Total Program	1	2	3	4	5
Contact with advisors	3.9	39.2	41.2	11.8	3.9
Counseling services	3.0	18.2	54.6	24.2	0
Study skills course	2.6	20.5	56.9	12.3	9.5
Total Program	2.3	36.3	36.4	22.7	0

Note: Contact with advisors (N=51); Counseling services (N=33):

Advanced study skills course (N=39); Total program (N=44)

Note: 1=Very satisfied; 2=moderately satisfied; 3=somewhat satisfied; 4=slightly dissatisfied; 5=dissatisfied

Table 10

Mean Ratings of Participants Level of Satisfaction
By Item of Scale Component and Total Program

1 Very Satisfied	2 Moderately Satisfied	3 Somewhat Satisfied	4 Slightly Dissatisfied	5 Dissatisfied
Contact with advisors			N	M
Comfort with V-TASP staff during visits			58	2.91
Time spent with V-TASP advisor			52	3.07
Ease of locating the advisor			55	3.10
Information provided by advisor			55	3.14
Interaction with the advisor			55	3.18
Meetings with V-TASP staff			55	3.40
Discussing social and interpersonal concerns			54	4.12
Counseling services				
Services provided by the center			54	3.44
Friendships with students at the center			54	3.88
Comfort at the center			54	4.46
Advanced study skills course				
Comfort experienced in the class			55	3.41
Helpfulness of the course			56	3.69

Table 10

Continued

Discussion section of the course	56	3.75
Liking for the course	56	3.78
Friendships formed in the class	57	3.80
Tests given in the class	57	3.85
Class materials used in the class	56	3.89
Computer application section of the course	56	3.92
Lecture section of the course	55	3.98
Applying information learned to other courses	55	4.63
Total program		
Understanding offered by V-TASP staff	56	3.14
Students met in V-TASP	55	3.16
Helpfulness of all services used	57	3.19
Places you've met other V-TASP students	54	3.35
Friendships with other participants of V-TASP	57	3.64

Discussion

In evaluating the results of this study, it should be emphasized that the data relate only to responses provided to Likert-type statements ranging from 1 to 5. The three open-ended statements were removed to determine the internal consistency for the scale. In addition, student characteristics were not analyzed by the responses provided. With these cautions in mind, some conclusions may be drawn from the study.

Overall, it seems that participants were satisfied with V-TASP and the individual program components. However, the advising and advanced study skills course components, in contrast to the counseling services component, received some ratings indicating dissatisfaction. Four percent of the respondents were dissatisfied with the advising component and 10% of the respondents were dissatisfied with the advanced study skills course component. The total program and the three components also received combined ratings of 12% indicating high satisfaction.

A few specific items were, however, demonstrated as high or low on satisfaction. The respondents seemed most satisfied with the services offered by the advisors and felt comfortable visiting them. However, participants felt unable to discuss social and interpersonal concerns with the advisors. The respondents did not feel comfortable at the counseling center, and did not feel they were able to apply information learned in the advanced study skills course to other classes. It is possible that students were more able to provide positive

and negative views of these areas because they were more familiar with the advising and study skills services. However, future modifications of V-TASP may include focusing upon the advisors' styles of interacting with students and including material in the advanced study skills course that can be generalized to classroom tasks.

On the basis of this study, it was concluded that the respondents support the value of V-TASP and are satisfied with the program and components. The response patterns, however, indicate a range of opinion on the degree of satisfaction with the program and individual components. With two exceptions at the dissatisfied extreme, the ratings ranged from "very satisfied" to "dissatisfied" for each component and the total program. More importantly, the majority of respondents rated 22 of the 25 items within a range of "moderately satisfied" to "somewhat satisfied"

Study 3

Comparisons Across Time

Subjects

Participants of this study included 100% of all black freshmen admitted to Virginia Polytechnic Institute & State University for the Fall quarter of each academic year between 1978 and 1988. See table 11 for N sizes.

Data base and variables

Data extracted from the official university data base were provided by Mr. Gerald McLaughlin of the Office of Institutional Research. Extracted information included: a) the students' overall quality credit average, b) enrolled quality credit average of students enrolled in the Fall term following their first year, and c) the percentage of black students enrolled in the Fall term following their first year.

Procedure and Results

Variables for black students enrolled as freshmen at VPI&SU in the Fall quarter of each year from 1978-83 were compared with black students enrolled at the university as freshmen in the Fall of each year from 1984-87. It was expected that the overall quality credit average, enrolled quality credit average of students enrolled in the Fall quarter following their first year, and the percentage of black students enrolled during the Fall quarter following their first year would differ

for students for the two academic periods (1978-83 and 1984-87) because V-TASP was instituted at VPI&SU in the Fall of 1984.

The outcome of V-TASP over time did not reveal clear patterns for these variables. The results of these comparisons are presented in Table 11. For the years before V-TASP, the mean number enrolled was 192; percent enrolled was 78.4%; the mean overall QCA was 1.921; and the enrolled QCA was 2.087. For the years during which V-TASP was operating, the mean number enrolled was 178; the percent enrolled was 76.9%; the mean overall QCA was 1.991; and the enrolled QCA was 2.170.

Table 11

Black Freshmen at VPI&SU Before and After V-TASP
by Percent Enrolled, Overall Quality Credit Average, and Enrolled
Quality Credit Average in Fall of Sophomore Year

Black Freshmen (1978-83) Before V-TASP

Year	1978	1979	1980	1981	1982	1983
Number	129	168	161	226	202	267
% Enrolled	77.4	78.8	81.9	81.4	76.7	74.5
Overall QCA	1.789	1.943	2.028	1.964	1.892	1.911
*Enrolled QCA	1.982	2.103	2.191	2.104	2.071	2.073

Black Freshmen (1984-88) After V-TASP

Year	1984	1985	1986	1987	1988
Number	203	181	110	219	210
% Enrolled	76.4	68.5	83.6	79.2	a
Overall QCA	1.919	1.895	2.088	2.062	a
*Enrolled QCA	2.099	2.133	2.220	2.230	a

Note: a-These data will not be available until Fall 1989

*For those enrolled in the Fall term following their first year.

Discussion

Results from the present comparison indicated, at best, partial support for the hypothesis that black student grades and the number of these students returning to VPI&SU after the implementation of V-TASP would differ from black student grades and return rates before V-TASP. The mean number of students enrolled during the first year was 192 before the program and 178 after V-TASP. These numbers represent a decrease in the number of students to enroll at the university once the program was instituted. However it is highly unlikely that this difference was influenced by the presence of V-TASP because students enroll before participating in the program. The percent of students returning after the first year was also lower after V-TASP than before. However the overall quality average and enrolled quality average seemed to increase after V-TASP was implemented (see Table 11). The findings before and after V-TASP are unclear, although the differences in enrolled and overall quality average appears to suggest that some institutional factor(s) led to a change within the black student population. It is possible that student characteristics and other institutional factors as well as V-TASP contributed to these changes.

Between University Comparisons

The between university evaluation provides answers to questions that the within university comparison evaluation could not easily address, such as how successful V-TASP accomplishes its goals as compared to other programs designed to retain and graduate black students. V-TASP was compared to two retention programs implemented at universities similar to Virginia Polytechnic Institute and State University (VPI&SU) with the following characteristics: located in the southeastern United States, 4-year public universities, coed, regional accreditation, number of applicants accepted (i.e. 64%, 78%, 76%), black student population, overall student population, and funding sources. The two comparison programs included the University Transition Program (UTP) and Peer Counseling Program (PCP). The UTP consists of several components including: personal development seminars, advising, an orientation series, and a lecture series. PCP consists of training upperclass black students to advise and counsel black undergraduates. Both programs were implemented in the Fall of 1984 and designed to retain and graduate black students.

To determine how V-TASP ranks with other retention programs, three evaluative criteria were investigated: performance, adequacy of performance, and efficiency. For hypothesis 1, performance was defined as year-to-year retention and graduation within a four-year period. For hypothesis 2, efficiency was defined as the total costs per student for participating in the program for the length of time specified in the proposal and for hypothesis 3, adequacy of

specified in the proposal and for hypothesis 3, adequacy of performance referred to the programs' capacity to meet the total amount of university need (i.e., retaining black students).

Study 1

Retention and Graduation

Subjects

Program Directors of minority retention programs at three, public institutions in the southeast agreed to provide data relevant to this study. In order to provide an overview of the universities surveyed, a profile of each university is presented in Table 12 which provides a description of the three comparison universities by the total number of students entering as freshmen each academic year from the Fall of 1979 to the Fall of 1987. A university was considered to have a retention program if a verifiable set of services or one major service existed on the campus that had been designed to retain and graduate black students. Of the ten universities contacted (including VPI&SU), three did not have the data requested, two did not have the staff and time to honor the request, and five agreed to participate in the study. Of these five, three provided complete and usable data and two universities provided incomplete data. Thus, the final sample was composed of three universities including VPI&SU.

Procedure and Data

During the Winter quarter of 1987, thirteen southeastern universities were contacted by telephone to determine if they had a specific retention service for enrolled black students. Of the thirteen,

ten universities reported having a distinct program for entering black students. Several telephone calls were made to each of the ten program directors and individual letters mailed to request participation in the study. All program directors were called at least three times and sent a minimum of four letters. The program directors were assured that confidentiality would be maintained by agreeing not to identify specific universities. Each program director was asked to provide retention and graduation patterns for four cohort years (i.e., participants entering the universities in the Fall of 1984, 1985, 1986, 1987), year to year retention rates for program participants of each cohort year, and graduation rates for the first cohort (1984-85) as of May 1988. The absence of graduation data for the fifth and sixth year of the first cohort (1984-85) entering the universities at the time of this study led to the request for graduation rates for a four year period, although research has indicated that the majority of black undergraduate students graduate within five to six years from the date of first entering a university. As a result, these figures should be interpreted with the understanding that an undetermined number of students for this cohort year (i.e. 1984) from each university, may graduate in five or six years (i.e., 1989 and 1990), although not represented with students graduating within a four-year span (i.e. 1988).

Table 12

**COMPARISON UNIVERSITIES
BY BLACK FRESHMEN FALL ENROLLMENT**

(1979-1987)

	V-TASP	UTP	PCP
1979	168	221	193
1980	161	267	268
1981	226	326	222
1982	202	320	265
1983	267	357	224
1984	203	382	309
1985	181	523	315
1986	110	429	303
1987	219	374	318

Results

Table 13 presents the number and percentage of V-TASP cohort participants from 1984-85 to 1987-88 as compared to cohort participants for Program B (University Transition Program) and Program C (Peer Counseling Program). The data indicated that V-TASP had the lowest year to year retention rate. As shown in Table 13 for cohort 1, in 1985-86, V-TASP had the lowest percentage of students returning to the university after the first year (80%) as compared to UTP (86%) and PCP (95%). For 1986-87, 33% of V-TASP participants returned as compared to 77% of UTP and 95% of PCP participants. For 1987-88, 47% of V-TASP participants returned and 55% of UTP and 91% of PCP participants returned. Finally, for the 1988-89 academic year, 53% of V-TASP participants returned, and 91% of PCP participants returned. The percentage of UTP participants returning for the 1988-89 academic year was unavailable. As presented in Table 13 a similar pattern was revealed for cohort 2 and cohort 3. However for cohort 4, a higher percentage of V-TASP participants returned in 1988-89 (98%) than for participants of PCP (91%). The percentage of UTP participants returning for 1988-89 was unavailable.

The results indicated that 14% of V-TASP participants from the 1984-85 academic year (i.e. cohort 1) graduated in four years (i.e. 1988). Six percent of UTP participants and 3% of PCP participants from cohort 1 graduated in 1988.

The results also revealed an increase in the number of students retained for V-TASP cohorts from the 1984 (i.e. cohort 1) academic year to 1987 (cohort 4) academic year. For example, in 1985-86 for cohort 1, 80% of the program participants remained after the first academic year. This percentage decreased for 1986-87 after the first year for cohort 2 to 67% but increased for cohort 3 to 81% after the first year of the 1987-88 academic year. For cohort 4, 98% of the participants returned after the first year for the 1987-88 academic term.

Table 13

RETENTION AND GRADUATION PATTERNS
BY PROGRAM AND COHORT YEAR

COHORT 1						
	1984-85	1985-86	1986-87	1987-88	1988-89	Graduation
V-TASP	51/100%	41/80%	32/63%	24/47%	27/53%	7/14%
UTP	86/100%	74/86%	66/77%	47/55%	-----	5/6%
PCP	66/100%	63/95%	63/95%	60/91%	60/91%	2/3%
COHORT 2						
	1985-86	1986-87	1987-88	1988-89		
V-TASP	75/100%	50/67%	45/60%	46/61%		
UTP	97/100%	78/80%	70/72%	-----		
PCP	69/100%	64/92%	63/91%	61/88%		
COHORT 3						
	1986-87	1987-88	1988-89			
V-TASP	54/100%	44/81%	44/81%			
UTP	83/100%	68/82%	-----			
PCP	72/100%	65/90%	65/90%			
COHORT 4						
	1987-88	1988-89				
V-TASP	104/100%	102/98%				
UTP	77/100%	-----				
PCP	79/100%	72/91%				

Discussion

The results indicated lower year to year retention rates for V-TASP cohorts 1, 2, and 3 and higher four-year graduation rates than the two comparison programs. However for cohort 4, a greater percentage of V-TASP participants returned for the second year (98%) than for participants of the Peer Counseling Program. It is difficult to determine if this rate was higher for the University Transition Program (UTP) because the percentage of UTP participants returning for 1988-89 was unavailable. The results also revealed an increase in the number of students returning for V-TASP cohorts from 1984 to 1987. The year to year retention rate appears to have started to increase with cohort 3.

Study 2

Program Cost Analysis

Subjects

Subjects consisted of three minority retention programs at three public universities in three southeastern states: Virginia Tech Academic Success Program (V-TASP); University Transition Program (UTP); and Peer Counseling Program (PCP). V-TASP has been described earlier. The University Transition Program was implemented at University B in 1984 with a primary goal of retaining and graduating black students. This program consists of several components including: personal development seminars, advising, an orientation series, and a lecture series. The Peer Counseling Program was also implemented at University C in 1984 with a primary goal of assisting with the adjustment of black students, thereby increasing retention and graduation rates. One upperclass black student is responsible for meeting with ten or fewer black undergraduate students at several structured and unstructured times during the year to provide assistance with concerns related to attending a predominantly white institution.

Procedure and data

Cost per student was determined by comparing the costs of the alternatives (Peer Advising and University Transition Program) with

the costs of the Virginia Tech Academic Success Program. The cost of each program was derived by using figures from the original proposal submitted to request program funding minus any indirect costs.

Indirect program costs were omitted because this information was unavailable for two of the programs. As a result of computing cost per student from dollar figures stated in the proposal and the omission of indirect costs, it is important to interpret the results as estimates of the amounts actually awarded by funding sources.

The proposal outlines the expenses required to maintain each program and the dollar figures defined as the costs on a yearly basis. Although Levin (1985) cautions against using cost data from program proposals because such projected costs may not represent actual program costs, no other figures were available for this evaluation. In addition, year-by-year costs for each program were similar. That is, the costs for year one were similar to year two costs in any one program. The categories of costs used for each program were personnel, facilities, equipment and materials, other program inputs, and student inputs. Personnel ingredients referred to all employees associated with each program. Facilities referred to the space required for the program (e.g., offices, classrooms). Equipment and materials included any supplies used to conduct the program (e.g., computers, books). Other program inputs referred to any ingredients not included under the previously described categories and student inputs referred to any materials, supplies, or funding provided by the program participants. The same categories of ingredients were used

to evaluate each program. These figures were used to determine the costs for each student to participate in the program for the time period as defined within the proposal. Cost-benefit analyses and cost-effective analyses were not determined for the programs because the data necessary to conduct such analyses were unavailable.

Method

To determine costs per student the total cost of each program was divided by the number of students participating in each program for 1984-85 (cohort 1); 1985-86 (cohort 2); 1986-87 (cohort 3); and 1987-88 (cohort 4).

Results

As presented in Table 14 the the dollar amount required to provide services to each V-TASP participant was \$2894.00 for 1984-85 as compared to \$2043.00 for services provided to each participant of the University Transition Program (UTP) and \$788.00 for each participant of the Peer Counseling Program (PCP. For 1985-86, the cost per student to participate in V-TASP was \$1968.00, \$1811 for each participant of UTP and \$754.00 for each participant of PCP. For 1986-87, the cost per student for V-TASP was \$2733.00, as compared to \$2117.00 for each UTP participant and \$722.00 for each PCP participant. Results for 1987-88 revealed that cost per student for V-TASP was \$1419.00 compared to \$2282.00 for each UTP participant and \$658.00 for each PCP participant.

Table 14

**Cost Per Student
By Retention Program and Cohort Year**

Cohort 1 (1984-85)

Program	Total Program Cost	*N	**Student Cost
V-TASP	147, 585	51	\$2894
UTP	175, 705	86	\$2043
PCP	52, 000	66	\$788

Cohort 2 (1985-86)

Program	Total Program Cost	*N	**Student Cost
V-TASP	147, 585	75	\$1968
UTP	175, 705	97	\$1811
PCP	52, 000	69	\$754

Cohort 3 (1986-87)

Program	Total Program Cost	*N	**Student Cost
V-TASP	147, 585	54	\$2733
UTP	175, 505	83	\$2117
PCP	52, 000	72	\$722

Cohort 4 (1987-88)

Program	Total Program Cost	*N	**Student Cost
V-TASP	147, 585	104	\$1419
UTP	175, 505	77	\$2282
PCP	52, 000	79	\$658

*Number of students participating for each cohort.

**Assume that costs for 2nd year of 1st cohort =costs for 2nd cohort

Discussion

The hypothesis that V-TASP is as cost-effective or more cost-effective than retention programs at comparable universities was not supported by the results. The total cost for V-TASP was lower than the total cost for the University Transition Program and higher than the total cost for the Peer Counseling Program. The findings also indicated that cost per student for V-TASP was higher for cohorts 1 (1984-85); cohort 2 (1985-86); and cohort 3 (1986-87) than costs for UTP and PCP. However cost per student for cohort 4 was lower for V-TASP than cost per student for UTP, although higher for PCP. The finding that the cost of providing services to each student participant of V-TASP was greater than the cost of services for either comparison program leads to questions about the relationship between program costs and effectiveness. That is, do the benefits of participating in V-TASP outweigh the dollar amount required to retain and graduate students? It is possible that participants who graduate from the university and obtain employment or graduate training contribute to society in such a way that the long-term benefits are greater than the short-term costs of the program. The relationship between costs and long-term benefit should be determined before concluding the failure or success of retention programs.

Study 3

Adequacy of Performance

Subjects

The subjects included program participants of each university retention program (Virginia Tech Academic Success Program; University Transition Program; Peer Counseling Program) at three southeastern, public universities for four academic years: 1984-85 (N=203); 1985-86 (N=241); 1986-87 (N=209); and 1987-88 (N=260). The total N size was 913.

Procedure and data

The measure of effectiveness for each retention program was defined in two ways: a) the total number of participants returning to the university after first entry as compared to the total number of students who entered the university and b) the total number of students graduating from the university within four years as compared to the total number of students who entered the university.

Method

The three retention programs were compared in terms of degree of adequate performance. The results of the alternative retention programs were compared to the results of the Virginia Tech Academic

Success Program. The mean rate of effectiveness was computed for each cohort by two types of effectiveness (i.e. year to year retention and graduation).

Results

As shown in Table 15, the average year to year retention rate for V-TASP participants for cohort 1 (1984-85) was 61%. The retention rate for UTP participants was 73% and 93% for PCP participants. For cohort 2 (1985-86) the average retention rate was 63% for V-TASP, 76% for UTP, and 90% for PCP. In 1986-87 for cohort 3 the average retention rate for V-TASP was 81%, 82% for UTP; and 90% for PCP. The findings reflected a different pattern for cohort 4 (1987-88) with an average retention rate for V-TASP of 98% and 91% for PCP. The average retention rate for UTP was unavailable for this cohort. The average retention rates also seemed to increase for each program from 1984-85 to 1987-88. V-TASP seemed to have the highest average gain with increases of 2%, 18% and 17% as compared to UTP gains of 3% and 6% and PCP gains of 7%, no gain, and 1%. The four-year graduation rate for V-TASP was 14%; 6% for UTP; and 3% for PCP.

Table 15

**Average Return and Graduation Rates for Retention Programs
by Cohort and Academic Year**

Year to Year Retention Averages

	1984-85	1985-86	1986-87	1987-88
	Cohort 1	Cohort 2	Cohort 3	Cohort 4
V-TASP	61%	63%	81%	98%
UTP	73%	76%	82%	—
PCP	83%	90%	90%	91%

Four-Year Graduation Rate

Cohort 1 (1984-85)

Graduation 1988

V-TASP	14%
UTP	6%
PCP	3%

Discussion

Suchman (1976) discussed adequacy of performance in terms of the ability of a program to meet the total amount of need and the impact of the program on those serviced by the program. The third hypothesis assessed by Study 3 that the effects of V-TASP are more adequate to meet the total amount of participant need than the effects of comparison programs was not supported according to Suchman's "total amount of need" definition. However the results appear to support the "impact of participants served" definition of adequate performance. The results indicated that V-TASP was less adequate to meet the needs of all participants for cohort 1, cohort 2, and cohort 3 as compared to UTP and PCP when those needs were defined as year to year retention. However the findings appear to indicate that V-TASP has become more effective in retaining students from year to year across time. The finding that V-TASP had higher graduation rates than two comparable programs may be understood by considering characteristics of the program participants. It is possible that a specific group of participants maintain close involvement with V-TASP services and activities, whereas other students have less consistent interactions with the program. As a result, the students closely aligned with V-TASP may constitute the percentage graduating within a four-year time span. Such an explanation is consistent with Suchman's (1976) second definition of adequate performance (i.e., program impact). Some programs perform adequately because of the large number of individuals serviced by the program but for other

types of programs adequate performance may be better defined by the strength of the influence the program has on a few individuals.

Discussion of Between University Comparisons

The first hypothesis of Study 1 that V-TASP participants have a higher year to year retention rate and graduation rate than participants of comparison universities was partially supported. The results indicated higher four-year graduation rates for V-TASP. However, the year to year retention rates were lower for V-TASP cohorts 1, 2, and 3, than rates of the two comparison programs. For cohort 4, a higher percentage of V-TASP participants returned for the second year (98%) than for participants of the Peer Counseling Program. The results also revealed an increase in the number of students returning for V-TASP cohorts from 1984 to 1987. The year to year retention rate appears to have started to increase with cohort 3.

The second hypothesis assessed by Study 2 that V-TASP is as cost-effective or more cost-effective than retention programs at comparable universities did not appear to be supported by the results of cohort 1 (1984-85); cohort 2 (1985-86); and cohort 3 (1986-87). However cost per student for cohort 4 was lower for V-TASP than cost per student for UTP, although higher for PCP. The total cost for V-TASP was lower than the total cost for UTP and higher than the total cost for PCP. This study was unable to include indepth cost analyses but these areas of evaluation are important to consider when making decisions about modification of the total program, individual components or alternate methods of retention and graduation.

The third hypothesis assessed by Study 3 that the effects of V-TASP are more adequate to meet the total amount of participant need than the effects of comparison programs was not supported by Suchman's (1976) "total amount of need" definition, although supported by the "impact of participants served" definition of adequate performance. The results indicated that V-TASP was less adequate to meet the needs of all participants of cohort 1, cohort 2, and cohort 3 as compared to UTP and PCP when those needs were defined as year to year retention. The findings also seemed to indicated that V-TASP has become more effective in retaining students from year to year.

GENERAL DISCUSSION

The purpose of this study was to evaluate the Virginia Tech Academic Success Program (V-TASP), a minority retention program implemented at Virginia Polytechnic Institute and State University in the Fall of 1984. V-TASP was evaluated according to five criteria of success: effort, performance, adequacy of performance, efficiency, and process (Suchman, 1976). The program was assessed on the basis of qualitative and quantitative within and between university comparisons. The objectives of this study included assessing the impact of V-TASP upon participants; identifying factors that made the program work or not work; determining the effectiveness of the program as compared to similar programs; and offering recommendations to improve the program's likelihood of meeting stated objectives.

In response to the hypotheses formulated for the three within university studies, the findings suggested that V-TASP participants are satisfied with the services and the program seems to have a positive influence upon the participants as compared to nonparticipants. It also appears that the implementation of V-TASP in 1984 may have had some minimal impact upon students' grades and enrollment percentages for the sophomore year, although it is likely that other factors contributed to changes within the black student population as well. This analysis of process revealed several significant practical findings that have implications for the administrative personnel of V-TASP. First, the data seem to suggest that the program components

may have an effect upon students other than those directly related to grades, retention, and graduation. Participants appear to benefit from the program in socio-emotional ways as well. These indirect effects may influence retention rates. The indication that students perceive themselves as less aimless and having control over their environments as a function of participating in the program may be an area that needs further investigation. The finding that V-TASP decreased participants' feelings of alienation, meaninglessness, and powerlessness is important, given the fact that the attrition rate of black students is not due solely to academic performance. Programs that focus on academic performance at the expense of social performance for this population may ignore the intricate relationship between academic performance and negative life events and encounters. For example, Walter (1983) investigated seven universities and reported that 54% of the students contemplating withdrawal did not attribute their decisions to academic failure but cited isolation, racism, and loneliness as reasons for their consideration of leaving the universities. The significance of these feelings (e.g., meaninglessness) have been underestimated by administrators. For example, Smith (1980) found that 92% of black students cited feelings of alienation and loneliness as an important barriers to remaining enrolled at predominantly white institutions. In contrast, 44% of white administrators and faculty cited these as barriers to retention.

Analyses by type of program contact suggests that the program components may have differential impacts upon students. For

example, the influence of counseling center services varied as a function of students' academic level. Using counseling services alone did not differentiate between freshmen, sophomore, and junior program participants and nonparticipants. However, seniors who used counseling services while participating in V-TASP differed from nonparticipants on program effectiveness. This finding is consistent with research indicating that counseling services may interact with students' academic level and result in different outcomes.

In addition, some individual components seem to have little impact upon students' feelings of meaninglessness, powerlessness, and alienation when used alone. However, when students use such services in conjunction with other services, the impact may be much greater. It is possible that the effect of counseling is minimal or nonexistent without advising or the advanced study skills course. A more focused assessment of the individual program components might highlight the contributions of the counseling component.

While participants of V-TASP were basically satisfied with the program components, they felt unable to discuss social and interpersonal concerns with the advisors, were uncomfortable at the counseling center, and felt unable to apply the information learned in the study skills course to other classes. Further evaluative research could assist in developing methods to respond to these concerns. For example, future studies might investigate the advising component to determine the types of styles presently used to advise students and the impact of these styles of advising on students' degree of

participation in the program, grade point average, and retention rates. This may be especially beneficial in light of research indicating that black students enter predominantly white universities with financial, interpersonal, and personal concerns. Expanding the role of the advisors to include the discussion of nonacademic matters in addition to academic concerns might also benefit students who feel uncomfortable in the counseling center. More specific and detailed inquiries about students' perceptions of the advanced study skills course and their efforts to generalize these skills to other classes could also lead to ways to increase the generalizability of the study skills material.

Findings for the three between university studies were only partially supported and less clear than the results of the within university comparisons. The year to year retention rate was lower for V-TASP than comparison programs and the costs per student somewhat higher. However it appears that V-TASP has continued to change since 1984 in terms of decreases in cost per student, increases in year to year retention, and adequacy of performance. V-TASP also seems to have a greater impact upon some participants than others across time as evidenced by the higher short-term graduation rates (i.e., four-year) for program participants of V-TASP as compared to the graduation rates of comparable programs within the same time span.

Limitations

The results of this evaluation appear to offer several areas for interpretation. However the findings must be carefully tempered in terms of psychometric considerations, research design, contextual variables, and generalizability. First, the inability to randomly assign subjects to participant and nonparticipant status does not allow any definitive statements to be made about the data. It is possible that the results stem from factors specific to the students (e.g., motivation, racial identity, socio-economic status, etc.) rather than the program. Selection biases may contribute to observed group differences. For example, participants may use program services because they are knowledgeable of their skills deficits and require V-TASP services to remain in school. In contrast, nonparticipants may not use the services because they have traditionally been academically successful. Thus, participants and nonparticipants may self-select on the basis of perceived skills and abilities. Selection biases may also include nonacademic factors. For example, Parham and Helms (1986) proposed that students' stages of racial identity may determine their reactions to racial issues. As a result, students in the first stage (pre-encounter) may decide not to use program services because they do not identify themselves as Black from an emotional or cognitive perspective. In contrast, students in the second stage of racial identity (encounter) may select the program because they are drawn to anything that emphasizes Blackness. Students in the third stage (internalization) may base their decision to use or not use the services on the quality of the program, rather than racially related concerns

because they have integrated the positives and negatives of various ethnic groups.

The method of investigating differences between participants and nonparticipants did not control for students' possible participation in either of the remaining two program components or both components. For example, if statistically significant differences were found between students who indicated participation in the advanced study skills course and students who did not participate in the course (nonparticipants), it is possible that the impact of the other two components (e.g., counseling, contact with advisors) may have contributed to the observed difference.

In addition to possible data misinterpretations because of factors related to the design, the validity of the instruments may have influenced the responses. Whereas the University Alienation Scale (Burbach, 1973) has adequate psychometric properties, the other scales (e.g., PCC, SSQ, PEQ) were not empirically established. For example, the validity of the questionnaires was unknown. The small sample sizes for participants and nonparticipants may have also decreased the statistical power of the analyses. Larger samples may have resulted in significant differences between the groups on alienation, meaninglessness, and powerlessness for the total program.

The results of this study can be better understood by considering subtle, yet meaningful factors that likely impact upon the universities and students studied. Variables specific to the universities include: admissions criteria, academic drop policies and procedures, and the

required minimum quality credit average. Such university characteristics may have contributed to the findings which revealed that V-TASP had lower year to year retention rates and slightly higher costs per student than comparison programs. Student characteristics related to academic achievement such as persistence, determination, and motivation may also have influenced the results of the between university comparisons and within university comparisons. Thus, the results of these studies should be interpreted within the context of the possible socio-political, student, and university influences that could not be controlled.

Finally, the findings of this evaluation can only be generalized to those students who were included in the sample. Further research is needed to generalize these findings beyond these cohorts and V-TASP.

Conclusions and Recommendations

The results of this study suggest that V-TASP likely has some positive practical effects for participants. The data and analyses presented in this study indicate that minority retention programs may benefit from cross-sectional and longitudinal evaluation. For the evaluative criteria in this study, the challenges for administrators and program directors seem related to the assessment of students before or immediately after enrolling at predominantly white universities on academic and nonacademic variables. The measures to be employed in these evaluations might include quantitative and academic, social, and psychological qualitative data. Developing a data base over time may provide program directors with more consistent predictors of

students who can benefit from program services. In addition, periodically interviewing students throughout their undergraduate experience may yield information relevant to staff and directors of the program for improvement of student socialization and academic performance. Variables shown to be relevant to the success or failure of black college students by other researchers should also be incorporated in the modification of minority retention programs and individual components. Some of the relevant variables might include: student-faculty interactions, student characteristics (e.g., racial identity, developmental stages, assertiveness), institutional racism, and university support systems. Nontraditional variables should be assessed as outlined by Sedlacek and Brooks (1976) and components developed to represent each of the eight themes. Special attention also needs to be directed to programs that yield reasonable retention and graduation rates, but for more minimal costs. Thus, multiple approaches to program design and evaluation may lead to a more cost-effective and cost beneficial method of retaining and graduating minority students than any single model.

APPENDIX

V-TASP EFFORT BY PROGRAM COMPONENT

Pre-assessment testing course	Three-tier advising	Counseling & study skills	Advanced Learning
Test administration (4-9 hrs)	Peer advisors (5 hrs wkly)	Study sessions (unavailable)	Preparation (4-6 hrs)
Scoring (1 hr per student)	Graduate advisors	Counseling (unavailable)	Teaching (2-4 hrs)
Staff (2 graduate students; 1 administrator)	(20 hrs wkly) Telephone calls 5-10 per wk Letters written Fall (5) Winter (5) Spring (5)	Tutoring (unavailable)	Instructors (2) (20 hrs per sections (2))
Data entry (5-10 hrs)	Faculty advisors (1-4 hrs)		

NOTE: This table indicates the time reported by staff and administrators for associated services. A range of 10-20 hours were used to pre-test students entering the university in the Fall of each year from 1984 to 1988. Peer advisors, graduate advisors, and faculty advisors rendered services (e.g., calling students, advising students, writing letters, etc.) from 26 to 40 hours each week. A monthly meeting held for an hour provided graduate advisors and the program director an opportunity to discuss program and student related concerns. Preparation and delivery time for two sections of the academic skills course required 6 to 10 hours for each of two instructors. The number of study skills, tutoring, and counseling sessions were unavailable. However advisors and participants verified activities of this component.

STUDENT SATISFACTION QUESTIONNAIRE

I am interested in evaluating the Virginia Tech Academic Success Program to see how well the program works. To do this, it's important to find out what you think of this program. Would you please answer these questions for me?

Please put a check next to the best answer.

1. Major:
 - Education
 - Arts & Sciences
 - Engineering
 - Architecture
 - Business
 - Human Resources

2. Classification:
 - Undecided
 - Freshman
 - Sophomore
 - Junior
 - Senior

3. Times on academic drop: 1 2 3

4. QCA
 - less than 1.00
 - 1.00 - 1.49
 - 1.50 - 1.99
 - 2.00 - 2.49
 - 2.50 - 2.99
 - 3.0 or higher

5. Future plans:
 - Employment
 - Graduate school
 - Military
 - Other_____

6. Parents yearly income:
 - \$10,000 or less
 - \$10,000 - 20,000
 - \$20,000 - 30,000
 - \$30,000 - 40,000
 - \$40,000 - 50,000
 - \$50,000 - 60,000
 - \$60,000 - 70,000

()\$70,000 or higher

7. Mother's Educational Level: ()High school or less
 ()2 year college
 ()College degree
 ()Graduate degree
8. Father's Educational Level: ()High school or less
 ()2 year college
 ()College degree
 ()Graduate degree
9. Mother's present or last occupation (please check only one):
 () Never worked outside of the home
 () Professional (at least bachelor degree)
 ex: teacher, clergyman, doctor, registered nurse
 () Skilled worker (substantial training required)
 ex: mason, supervisory chef, beautician, licensed
 practical nurse
 () Less skilled (little training required), little
 chance for advancement. ex: janitor, food service
 worker
10. Father's present or last occupation (please check only one):
 () Never worked outside of the home
 () Professional (at least bachelors degree)
 ex: teacher, clergyman, doctor, registered nurse
 () Skilled worker (substantial training required)
 ex: mason, supervisory chef, beautician, licensed
 practical nurse
 () Less skilled (little training required), little
 chance for advancement. ex: janitor, food service
 worker, shortorder cook,. hospital orderly, aide
11. Are you familiar with the Virginia Tech Academic Success
 Program (V-TASP)?
- | | | | | |
|----------|------------|----------|----------|----------|
| Very | Moderately | Somewhat | Slightly | Not |
| Familiar | familiar | familiar | familiar | familiar |
12. Do you ever visit the advisors and administrators of the V-TASP
 program?
- | | | | | |
|------------|-----------|--------------|--------|-------|
| Frequently | Sometimes | Occasionally | Rarely | Never |
|------------|-----------|--------------|--------|-------|

visit

visit

visit

visit

visit

If you do:

13. When you visit, does the V-TASP staff make you feel comfortable or uncomfortable?

Very comfortable Moderately comfortable Somewhat comfortable Slightly comfortable Not comfortable

14. Do you feel that the V-TASP services help you or don't help you?

Very helpful Moderately helpful Somewhat helpful Slightly helpful Not helpful

15. Have you made friends with students who participate in V-TASP?

Numerous friends Some friends A couple of friends Few friends No friends

16. For what length of time have you participated in V-TASP?

Less than 6 months 6 months less than 1 year 1 year 1-2 years

17. Do you feel that the people who work with V-TASP understand your feelings?

Understand well Moderately understand Somewhat understand Slightly understand Don't understand

18. Are you happy or unhappy with the students you've met in V-TASP?

Very happy Moderately happy Somewhat happy Slightly happy Unhappy

19. Are you happy or unhappy with the place you meet V-TASP students?

Very happy Moderately happy Somewhat happy Slightly happy Unhappy

20. When you've had academic problems, do you think the V-TASP staff has helped you with them?

Very helpful Moderately helpful Somewhat helpful Slightly helpful Not helpful

21. Do you have any problems getting to see V-TASP staff?

Numerous problems	Some problems	A couple of problems	Few problems	No problems
----------------------	------------------	-------------------------	-----------------	----------------

22. Do you ever meet with a staff member by yourself?

Frequently meet alone	Sometimes meet alone	Occasionally meet alone	Rarely meet alone	Never alone
--------------------------	-------------------------	----------------------------	----------------------	----------------

23. Do you ever meet within a group with staff?

Frequently meet	Sometimes meet	Occasionally meet	Rarely meet	Never meet
--------------------	-------------------	----------------------	----------------	---------------

24. Do you feel that these meetings help you or don't help you?

Very helpful	Sometimes helpful	Occasionally helpful	Rarely helpful	Never helpful
-----------------	----------------------	-------------------------	-------------------	------------------

25. Do you find the meetings more helpful when you are alone or with a group?

Alone is more helpful	About the same	Both are helpful at times	Neither have been helpful	Group is more helpful
-----------------------------	-------------------	---------------------------------	------------------------------	-----------------------------

26. Do you ever go to the Counseling Center to see assistance (e.g., tutoring)?

Frequently go	Sometimes go	Occasionally go	Rarely go	Never go
------------------	-----------------	--------------------	--------------	-------------

If you do:

27. Have you made friends with other people who come to the Center?

Numerous friends	Some friends	A couple of friends	Few friends	No friends
---------------------	-----------------	------------------------	----------------	---------------

28. How do you like the things you do at the Counseling Center?

Like them	Moderately like them	Like some of them	Slightly like them	Don't like them
-----------	-------------------------	----------------------	-----------------------	-----------------------

29. Do you feel comfortable or uncomfortable at the Counseling Center?

Very comfortable Moderately comfortable Somewhat comfortable Slightly comfortable not comfortable

30. Have you received tutoring at the Counseling Center?

Frequently Sometimes Occasionally Rarely Never

31. Have you received personal counseling at the Counseling Center?

Frequently Sometimes Occasionally Rarely Never

32. Have you learned study skills at the Counseling Center?

Frequently Sometimes Occasionally Rarely Never

33. Have you used career resources at the Counseling Center?

Frequently Sometimes Occasionally Rarely Never

34. Have you received testing at the Counseling Center?

Frequently Sometimes Occasionally Rarely Never

35. How often (estimate) have you used the Tutoring Services since enrolling at VPI&SU?

20 times or more 10-19 times 5-9 times less than 5 times Have not used

36. How often (estimate) have you used the Personal Counseling Services?

20 times or more 10-19 times 5-9 times less than 5 times Have not used

37. How often (estimate) have you used the Study Skills Service?

20 times or more 10-19 times 5-9 times less than 5 times Have not used

38. How often (estimate) have you used the Career Resources Service?

20 times 10-19 5-9 times less than Have not

- or more times 5 times used
39. How often (estimate) have you used the Testing Service?
- 20 times or more 10-19 times 5-9 times less than 5 times Have not used
40. Do you think the time you spend with the V-TASP advisor is worthwhile for you?
- Very worthwhile Sometimes worthwhile Occasionally worthwhile Rarely worthwhile Never worthwhile
41. Does your advisor give you useful information?
- Frequently useful Sometimes useful Occasionally useful Rarely useful Never useful
42. Is it easy to locate your advisor?
- Frequently easy Sometimes easy Occasionally easy Rarely easy Never easy
43. Are you satisfied with the interaction between the advisor and yourself?
- Very satisfied Somewhat satisfied Occasionally satisfied Rarely satisfied Never satisfied
44. Do you ever seek the assistance of your advisor on your own?
- Frequently seek Sometimes seek Occasionally seek Rarely seek Never seek
45. Do you interact with your advisor in any social situations?
- Frequently interact Sometimes interact Occasionally interact Rarely interact Never interact
46. Do you feel comfortable approaching your advisor to discuss social or interpersonal concerns as well as academic concerns?
- Very comfortable Somewhat comfortable Occasionally comfortable Rarely comfortable never comfortable
47. Do you (have you) attend(ed) the Advanced Learning and Study Skills course?

Frequently attend	Sometimes attend	Occasionally attend	Rarely attend	Never attend
----------------------	---------------------	------------------------	------------------	-----------------

48. Do you feel the course is helpful?

Very helpful	Moderately helpful	Somewhat helpful	Slightly helpful	Not helpful
-----------------	-----------------------	---------------------	---------------------	----------------

49. Do you have any problem applying information learned in the class to your other courses?

Numerous problems	Some problems	A couple of problems	Few problems	No problems
----------------------	------------------	-------------------------	-----------------	----------------

50. Do you feel comfortable or uncomfortable in the course?

Very comfortable	Moderately comfortable	Somewhat comfortable	Slightly comfortable	Not comfortable
---------------------	---------------------------	-------------------------	-------------------------	--------------------

51. Do you ever meet with class instructor(s) by yourself?

Frequently meet	Sometimes meet	Occasionally meet	Rarely meet	Never meet
--------------------	-------------------	----------------------	----------------	---------------

52. How do you like the course?

Like it very much	Moderately like it	Like it somewhat	Slightly like it	Do not like it
----------------------	-----------------------	---------------------	---------------------	-------------------

If you like some parts and not others:

53. How do you like the Lecture?

Like it very much	Moderately like it	Like it somewhat	Slightly like it	Do not like it
----------------------	-----------------------	---------------------	---------------------	-------------------

54. How do you like the Computer Application?

Like it very much	Moderately like it	Like it somewhat	Slightly like it	Do not like it
----------------------	-----------------------	---------------------	---------------------	-------------------

55. How do you like the Discussion?

Like it very much	Moderately like it	Like it somewhat	Slightly like it	Do not like it
----------------------	-----------------------	---------------------	---------------------	-------------------

56. How do you like the Class materials?

Like it very much	Moderately like it	Like it somewhat	Slightly like it	Do not like it
----------------------	-----------------------	---------------------	---------------------	-------------------

57. How do you like the Tests?

Like it very much	Moderately like it	Like it somewhat	Slightly like it	Do not like it
----------------------	-----------------------	---------------------	---------------------	-------------------

58. Have you made friends with other students in the class?

Numerous friends	Some friends	A couple of friends	Few friends	No friends
---------------------	-----------------	------------------------	----------------	---------------

59. Overall, do you think the time you spend with V-TASP staff is worthwhile for you?

Very worthwhile	Moderately worthwhile	Somewhat worthwhile	Slightly worthwhile	Not worthwhile
--------------------	--------------------------	------------------------	------------------------	-------------------

60. How do you feel that you're doing (academically) at VPI&SU?

Doing extremely well	Doing well	Doing fairly well	Doing o.k.	Doing poorly
----------------------------	---------------	-------------------------	---------------	-----------------

61. How do you feel that you're doing (socially) at VPI&SU?

Doing extremely well	Doing well	Doing fairly well	Doing o.k.	Doing poorly
----------------------------	---------------	-------------------------	---------------	-----------------

62. If you could make any changes with V-TASP that you wanted, what changes would you make?

63. What about V-TASP (if anything) is making you as effective as you are?

64. I am sincerely interested in how you feel about V-TASP, please write anything else you like or dislike about the program.

PERCEIVED CHANGES CHECKLIST

Below are some statements regarding university issues with which you may agree or disagree. Please register your feelings regarding these statements as they stand. Please complete each item.

1. I am now better able to understand class material than two years ago.

Very true	Moderately true	Somewhat true	Slightly true	Not true
-----------	-----------------	---------------	---------------	----------

2. I am more confident about my future than before.

Very true	Moderately true	Somewhat true	Slightly true	Not true
-----------	-----------------	---------------	---------------	----------

3. I rarely (if ever) think about leaving school.

Very true	Moderately true	Somewhat true	Slightly true	Not true
-----------	-----------------	---------------	---------------	----------

4. I have made more friends by being in V-TASP

Very true	Moderately true	Somewhat true	Slightly true	Not true
-----------	-----------------	---------------	---------------	----------

5. I am more comfortable when I approach staff at VPI&SU

Very true	Moderately true	Somewhat true	Slightly true	Not true
-----------	-----------------	---------------	---------------	----------

6. I am better able to use the computer now.

Very true	Moderately true	Somewhat true	Slightly true	Not true
-----------	-----------------	---------------	---------------	----------

7. I am more competent at selecting my courses.

Very true	Moderately true	Somewhat true	Slightly true	Not true
-----------	-----------------	---------------	---------------	----------

8. I know where to go to find help with writing papers.

Very true	Moderately true	Somewhat true	Slightly true	Not true
-----------	-----------------	---------------	---------------	----------

9. I like VPI&SU more now than before.

Very true	Moderately true	Somewhat true	Slightly true	Not true
--------------	--------------------	------------------	------------------	-------------

10. The purpose of homework is clearer at this point.

Very true	Moderately true	Somewhat true	Slightly true	Not true
--------------	--------------------	------------------	------------------	-------------

11. My study time has increased.

Very true	Moderately true	Somewhat true	Slightly true	Not true
--------------	--------------------	------------------	------------------	-------------

12. I am more open to suggestions on how to study.

Very true	Moderately true	Somewhat true	Slightly true	Not true
--------------	--------------------	------------------	------------------	-------------

13. I seek assistance when an academic difficulty arises.

Very true	Moderately true	Somewhat true	Slightly true	Not true
--------------	--------------------	------------------	------------------	-------------

Your comments about any other changes you perceive as a result of participating in V-TASP are appreciated.

PROGRAM EFFECTIVENESS

I am interested in evaluating the Virginia Tech Academic Success Program (V-TASP) to see how well the program works. To do this, it is important to find out what you think of this program. Would you please answer these questions for me?

1. Has your academic life changed since your freshman year at VPI&SU?

Very much changed	Moderately changed	Somewhat changed	Slightly changed	Not changed
----------------------	-----------------------	---------------------	---------------------	----------------

2. Have your grades shown an increase over the years?

Great increase	Moderate increase	Somewhat increased	Slight increase	No increase
-------------------	----------------------	-----------------------	--------------------	----------------

3. Has your study time increased?

Great increase	Moderate increase	Somewhat increased	Slight increase	No increase
-------------------	----------------------	-----------------------	--------------------	----------------

4. Do you find enjoyment with your courses?

Great enjoyment	Moderate enjoyment	Somewhat of an enjoyment	Slight enjoyment	No enjoyment
--------------------	-----------------------	-----------------------------	---------------------	-----------------

5. Do you feel that your reading skills have improved?

Greatly improved	Moderately improved	Somewhat improved	Slightly improved	No improvement
---------------------	------------------------	----------------------	----------------------	-------------------

6. Do you think your writing skills have improved?

Very much improved	Moderately improved	Somewhat improved	Slightly improved	Not improved
-----------------------	------------------------	----------------------	----------------------	-----------------

7. Has the Virginia Tech Academic Success Program (V-TASP) contributed to these academic changes?

Very much contributed	Moderately contributed	Somewhat contributed	Slightly contributed	Not contributed
--------------------------	---------------------------	-------------------------	-------------------------	--------------------

8. Has the Counseling Center contributed to these academic changes?

Very much contributed Moderately contributed Somewhat contributed Slightly contributed Not contributed

9. Has the Writing Center contributed to these academic changes?

Very much contributed Moderately contributed Somewhat contributed Slightly contributed Not contributed

10. Has the Learning Resources Center contributed to these academic changes?

Very much contributed Moderately contributed Somewhat contributed Slightly contributed Not contributed

11. Has your social life changed since your freshman year at VPI&SU?

Very much changed Moderately changed Somewhat changed Slightly changed Not changed

12. Has your circle of friends increased?

Very much increased Moderately increased Somewhat increased Slightly increased Not increased

13. Have you become more acquainted with faculty members?

Very much acquainted Moderately acquainted Somewhat acquainted Slightly acquainted Not acquainted

14. Do you go out more often (e.g., movies, concerts, etc.)?

Much more often Moderately often Somewhat often Slightly often No more often

15. Do you attend campus events (e.g., plays, speakers) more often?

Much more often Moderately often Somewhat often Slightly often No more often

16. Do you go out with other students more often?

Much more often Moderately often Somewhat often Slightly often No more often

17. Has the Virginia Tech Academic Success Program contributed to these social changes?

Very much contributed Moderately contributed Somewhat contributed Slightly contributed Not contributed

18. Has the Counseling Center contributed to these social changes?

Very much contributed Moderately contributed Somewhat contributed Slightly contributed Not contributed

19. Has the Writing Center contributed to these social changes?

Very much contributed Moderately contributed Somewhat contributed Slightly contributed Not contributed

20. Has the Learning Resources Center contributed to these social changes?

Very much contributed Moderately contributed Somewhat contributed Slightly contributed Not contributed

21. Are there staff at VPI&SU who have contributed to your personal change?

Great contrib. Moderate contrib. Somewhat of contrib. Slight contrib. None contrib.

22. If so: Who are they and in what department are they employed?

23. Are there staff members of VPI&SU who have made a contribution to your academic program?

Great Moderate Somewhat Slight None

UNIVERSITY ALIENATION SCALE

Below are some statement regarding university issues with which you may agree or disagree. Please register your feelings regarding these statements. i.e., whether you agree or disagree with the statements as they stand. Please complete every item.

- (M) 1. The site and complexity of this university make it very difficult for a student to know where to turn.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
-------------------	-------	-----------	----------	----------------------

- (P) 2. It is only wishful thinking to believe that one can really influence what happens at this university.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
-------------------	-------	-----------	----------	----------------------

- (P) 3. Classes at this university are so regimented that there is little room for the personal needs and interest of the student.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
-------------------	-------	-----------	----------	----------------------

- (P) 4. The Faculty has too much control over the lives of the students of this university.

Strongly agree	Agree	Uncertain	Disagree	Strongly agree
-------------------	-------	-----------	----------	-------------------

- (M) 5. The bureaucracy of this university has me confused and bewildered.

Strongly agree	Agree	Uncertain	Disagree	Strongly agree
-------------------	-------	-----------	----------	-------------------

- (S) 6. I feel that I am an integral part of this university community.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
-------------------	-------	-----------	----------	----------------------

(M) 7. Things have become so complicated at this university that I really don't understand what is going on.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
----------------	-------	-----------	----------	-------------------

(S) 8. I seldom feel "lost" or "alone" at this university.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
----------------	-------	-----------	----------	-------------------

(M)9. Students are just so many cogs in the machinery of this university.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
----------------	-------	-----------	----------	-------------------

(S)10. I don't have as many friends as I would like at this university.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
----------------	-------	-----------	----------	-------------------

(P)11. Most of the time I feel that I have an effective voice in the decision regarding my destiny at this university.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
----------------	-------	-----------	----------	-------------------

(M)12. Life at this university is so chaotic that the student really doesn't know where to turn.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
----------------	-------	-----------	----------	-------------------

(S)13. Many students at this university are lonely and unrelated to their fellow human beings.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
----------------	-------	-----------	----------	-------------------

(P)14. More and more, I feel helpless in the face of what's happening at this university.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
-------------------	-------	-----------	----------	----------------------

(M)15. There are forces affecting me at this university today.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
-------------------	-------	-----------	----------	----------------------

(M)16. I can't seem to make much sense out of my university experience.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
-------------------	-------	-----------	----------	----------------------

(S)17. My experience at this university has been devoid of any meaningful relationships.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
-------------------	-------	-----------	----------	----------------------

(P)18. The administration has too much control over my life at this university.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
-------------------	-------	-----------	----------	----------------------

(P)19. This university is run by a few people in power and there is not much a student can do about it.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
-------------------	-------	-----------	----------	----------------------

(P)20. The student has little chance of protecting his personal interest when they conflict with those of this university.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
-------------------	-------	-----------	----------	----------------------

(S)21. In spite of the fast pace of this university, it is easy to make many close friends that you can really count on.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
-------------------	-------	-----------	----------	----------------------

(M)22. My life is so confusing at this university that I hardly know what to expect from day to day.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
-------------------	-------	-----------	----------	----------------------

(M)23. In this fast changing university with so much conflicting information available, it is difficult to think clearly about many issues.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
-------------------	-------	-----------	----------	----------------------

(S)24. This university is just too big and impersonal to provide for the individual student.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
-------------------	-------	-----------	----------	----------------------

Worksheet for Estimating Costs (University A)

Ingredients	Total Costs	Cost to Sponsor	Cost to other Gov Agencies	Student Costs
Personnel				
Director-half time faculty position	31,614	22,054*	9,560	---
Researcher analyst 20 hrs/wk-12 mts	---	---	---	---
10 graduate asst. 20 hrs/wk (7=12 mts; 3=9 mts)	81,810	30,000	51,810	---
2 graduate asst. 10 hrs/wk (1=12 mts; 1=9 mts)	8,900	---	8,900	---
Teacher of course one-fourth time faculty position	15,762*	---	15,762*	---
Materials & Equipment				
Reproduction and mailing of brochures	2,000	---	2,000	---
Fall workshop materials	500	---	500	---
Building data base/ mailings; consultations	2000	---	2000	---
Materials & resources for course seminar	2,000	---	2,000	---
Other				
Computer time	3,000	3,000	---	---
Total Ingredients	147,586	55,054	92,532	---

Worksheet for Estimating Costs (University B)

Ingredients	Total Costs	Cost to Sponsor	Cost to other Gov Agencies	Student Costs
Personnel				
Director	30,000	30,000	---	---
10 Tutor/ Counselors	6,000	6,000	---	---
5 Instructors	1,250	1,250	---	---
1 Graduate Asst.	800	800	---	---
Research Analyst	23,000	23,000	---	---
Materials				
Books	6,880	6,880	---	---
Facilities				
Housing	13,760	13,760	---	---
Rooms for tutors	1,280	1,280	---	---
Other				
Tuition fees (instate)	15,471	15,471	---	---
(outstate)	5,460	5,460	---	---
Grant	40,500	40,500	---	---
Stipend	5,160	5,160	---	---
Meals	26,144	26,144	---	---
Total ingredients	175,705	175,705	---	---

Worksheet for Estimating Costs (University C)

Ingredients	Total Costs	Cost to Sponsor	Cost to other Gov Agencies	Student Costs
<hr/>				
Personnel				
Director	42,000	42,000	---	---
10 Student mentors	8,000	8,000	---	---
Materials and Equipment				
Supplies	2,000	2,000	---	---
<hr/>				
Total ingredients	52,000	52,000	---	---

Dear _____:

This letter is a brief follow-up to our telephone conversation. As you may recall, I am a graduate student at Virginia Polytechnic Institute and State University in Blacksburg, Virginia. At this time, I am evaluating a minority retention program that we have had on this campus since the Fall of 1984. My dissertation task includes obtaining comparative data from similar universities to determine if our program is as successful or more successful than other retention programs. Thus, I am still requesting your assistance in this effort.

I have enclosed a list of the information that you requested during our telephone conversation. If you have any further questions, please feel free to contact me. I would welcome the opportunity to continue discussing this project with you. Your assistance in this endeavor is greatly appreciated.

Sincerely,

Shanette M. Harris

DATA REQUESTED FROM UNIVERSITIES

- I. Program Participants
 - a. Total number of participants for each year
 - b. Total number of participants suspended each year
 - c. Cumulative grade point average of participants each year
 - d. Total number of participants returning for following year
 - e. Pre-enrollment data of participants each year (average):
 1. SAT verbal
 2. SAT math
 3. High school grade point average
 4. High school rank
- II. Nonparticipants (Black)
 - a. Total number of nonparticipants for each year
 - b. Total number of nonparticipants suspended each year
 - c. Cumulative grade point average of participants each year
 - d. Total number of nonparticipants returning for following year
 - e. Pre-enrollment data of nonparticipants each year (average):
 1. SAT verbal
 2. SAT math
 3. High school grade point average
 4. High school rank
- III. Program Costs
 - a. Budget figures employed to obtain program fundin
 - b. Ingredients not included in budget (e.g., secretarial assistance, supplies, etc.)
- IV.
 - a. Total number of minorities entering each year
 - b. Total number of minorities returning the following year
- V. University Retention Rates
 - a. Overall university retention rates (1979...1983)
 - b. Overall university retention rates (1984-1987)
- VI. Graduation Rates
 - a. Black students
 - b. All students
 - c. Program participants

Dear _____:

This is a brief follow-up to our telephone conversations. Enclosed is a list of the information that I requested earlier. I realize that you and your staff are busy at this time, however your assistance and immediate attention to this request is greatly appreciated. As stated earlier, the information that you provide will be held in confidence and employed in a professional manner.

If you have any questions, please contact me.

Sincerely,

Shanette M. Harris

REFERENCES

- Astin, A.W. (1973). Student persistence: Some stay, some don't-why? College and University, 48, 298-306.
- Astin, A. (1975). Preventing students from dropping out. San Francisco: Jossey-Bass.
- Ballard, A.B. (1973). The education of Black folk: The Afro-American struggle for knowledge in White America. Harper and Row Publishers.
- Burbach, H.J. (1972). The development of a contextual measure of alienation. Pacific Sociological Review, 15, 225-234.
- Campbell, D.T. & Stanley, J.C. (1963). Experimental and quasi-experimental designs for research. Boston: Houghton Mifflin Company.
- Cherns, A. (1969). Social research and its diffusion. Human Relations, 22, 209-218.
- Clowes, D.A., Hinkle, D.E., & Smart, J.C. (1986). Enrollment patterns in postsecondary education, 1961-1982. Journal of Higher

Education, 57, 121-133.

Deutscher, I. (1977). Toward avoiding the goal trap in evaluation research In F.G. Caro (ed.). Readings in Evaluation Research. New York: Russell Sage Foundation.

Epps, E.G. (1972). Black Students in White Schools. Worthington, Ohio: Charles A. Jones.

Fleming, J. (1980). The Impact of College Environments on Black Students. Technical Report to the Carnegie Corporation, United Negro College Fund.

Fleming, J. (1981). Stress and satisfaction in college years of black students. Journal of Negro Education, 50, 307-318.

Garcia, S.A., & Presley, K. (1981). An assessment and evaluation program for Black university students in academic jeopardy: A descriptive analysis. Journal of Community Psychology, 9, 67-77.

Gareau, J. (1987, November 29). A new middle class is beginning to live the American dream. The Washington Post. p. A, 17.

Hare, N. (1987, October). Today's Education, p. 30.

Hedegard, J., & Brown, D. (1969). Encounters of some Negro and

White freshmen with a public multi-university. Journal of Social Issues, 25, 131-144.

Hughes, M.S. (1987). Black students' participation in higher education. Journal of College Student Personnel, 28, 532-545.

Institute for the Study of Educational Policy, Equal Educational Opportunity. The States of Black Americans in Higher Education, 1975-1977, 3rd Status Report (Washington, D.C.: Institute for the Study of Educational Policy, 1980), p. 84.

Jensen, A.R. (1969). Environment, heredity, and intelligence. Harvard Educational Review, 39, 1-123.

Jones, C.J., Harris, I.J., Hauck, W.E. (1971). Differences in perceived sources of academic difficulties: Black students in predominantly white colleges. Journal of Negro Education, 24, 519-529.

Kazdin, A.E. (1980). Research Design in Clinical Psychology. New York: Harper & Row.

Lee, C.C. (1982). Black support group: Outreach to the alienated Black college student. Journal of College Student Personnel, 23, 271-273.

Levin, H.M. (1983). Cost-Effectiveness: A Primer, New Perspectives in Evaluation. California: Sage Publications, Inc.

Loo, C.M. & Rolison, G. (1986). Alienation of ethnic minority students at a predominantly white university. Journal of Higher Education, 57, 58-77.

Miller, C.L. (1981). Higher education for Black Americans: Problems and issues. Journal of Negro Education, 50, 208-223.

National Advisory Committee on Black Higher Education and Black Colleges and Universities. Still a Lifeline: The Status of Historically Black Colleges and Universities, 1975-78 (Washington, D.C.: U.S. Government Printing Office, 1980), p. 48-53.

Nettles, M.T., Thoeny, R.A., Gosman, E.J. (1986). Comparative and predictive analysis of black and white students' college achievement and experiences. Journal of Higher Education, 57, 289-318.

Nettles, M.T. & Johnson, J.R. (1987). Race, sex, and other factors as determinants of college students' socialization. Journal of College Student Personnel, 28, 512-524.

Noel, L., Levitz, R., Saluri, D., and Associates (1985). Increasing

Student Retention. San Francisco: Jossey-Bass.

Orbach, L.B. (1988). Passing basic writing: Toward a different measure of retention of underprepared Black students. Journal of College Student Development, 29, 449-453.

Pentages, T.J., & Creedon, C.F. (1978). Studies of college attrition: 1960-1975. Review of Educational Research, 48, 49-101.

Portes, A., & Wilson, K.L. (1976). Black-white differences in education attainment. American Sociological Review, 41, 414-431.

Rutman, L. (1977). Planning an evaluation study. In L. Rutman (ed.), Evaluation Research Methods: A Basic Guide (p. 13-39). California: Sage Publications.

Smith, D.H. (1981). Social and academic environments of black students on white campuses. Journal of Negro Education, 50, 299-306.

Staff, (1987, September 30). Colleges in California seek ways to expand pool of Hispanic students. The Chronicle of Higher Education, p. A, 33.

Staff (1987, October 7). House panel assails U.S. Civil-Rights Office for

failing to act on desegregation cases. The Chronicle of Higher Education, p. A, 32.

Stanley, J.C. (1971). Predicting college success of educationally disadvantaged students. In A.B. Ballard The Education of Black Folk. New York: Harper & Row Publishers.

Suchman, E.A. (1976). Evaluative Research: Principles and Practice in Public Service and Social Action Programs. New York: Russell Sage Foundation.

Suen, H.K. (1983). Alienation and attrition of black college students on a predominantly white campus. Journal of College Student Personnel, 24, 117-121.

Thomas, G.E., Alexander, K.L., & Eckland, B.K. (1977). Access to higher education: How important are race, sex, social class, and academic credentials for college access? Baltimore: The Johns Hopkins University Center for Social Organization of Schools. Report No. 226 p. 414.

Tracey, T.J. & Sedlacek, W.E. (1985). The relationship of noncognitive variables to academic success: A longitudinal comparison by race. Journal of College Student Personnel, 26, 405-410.

- Trippi, J.F. & Baker, S.B. (1989). Student and residential correlates of Black student grade performance and persistence at a predominantly white university campus. Journal of College Student Development, 30, 136-143.
- Turner, R.D. (1985). The resurgence of racism on White campuses. Black Collegian, September-October, 18-24.
- U.S. Bureau of the Census (1984). School enrollment-social and economic characteristics of students. Current population reports, Washington, D.C.: U.S. Government Printing Office.
- Weiss, C.H. (1972). Evaluation Research: Methods for Assessing Program Effectiveness. New Jersey: Prentice-Hall, Inc.
- Williams, J.D. (1986). State of Black America. New York: The National Urban League.
- Wrightstone, J.W. (1969). Evaluating education programs. The Urban Review, 3, 5-6.

**The two page vita has been
removed from the scanned
document. Page 1 of 2**

**The two page vita has been
removed from the scanned
document. Page 2 of 2**