A Study of the Compensatory Education Program at Northeastern Illinois University

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LOYOLA UNIVERSITY
CHICAGO, ILLINOIS

A STUDY OF
THE COMPENSATORY EDUCATION PROGRAM
AT NORTHEASTERN ILLINOIS UNIVERSITY

A DISSERTATION
SUBMITTED AS
PARTIAL FULFILLMENT
OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF EDUCATION

BY ERIC B. MOCH

MEMBERS OF THE COMMITTEE:

DR. BARNEY BERLIN
MR. WILLIAM DAVIS
DR. JACK KAVANAUGH
ACKNOWLEDGMENTS

To Barbara, my lovely wife, whose inspiration and continued faith in me leveled the depressions and smoothed the wrinkles of despair. It is her work as much as mine, and I proudly share with her any accolades.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>INTRODUCTION</th>
<th>REVIEW OF THE LITERATURE</th>
<th>DESIGN AND PROCEDURE</th>
<th>RESULTS OF STATISTICAL ANALYSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Definition of Terms</td>
<td>&quot;High Risk&quot; Programs</td>
<td>Sample</td>
<td>Hypotheses Related to Grade Point Average</td>
</tr>
<tr>
<td></td>
<td>The Problem</td>
<td>Studies on Cognitive Development in Relationship</td>
<td>Treatment</td>
<td>Findings and Discussion on Hypothesis 1</td>
</tr>
<tr>
<td></td>
<td>Summary</td>
<td>to Socio-Economic Status</td>
<td>Hypotheses</td>
<td>Findings and Discussion on Hypothesis 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Studies on Personality Development in Relationship</td>
<td>Data Gathering</td>
<td>Findings and Discussion on Hypothesis 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>to Socio-Economic Level</td>
<td>Measures of Aptitude</td>
<td>Findings and Discussion on Hypothesis 4</td>
</tr>
<tr>
<td>II.</td>
<td></td>
<td></td>
<td>Measures of Academic Success in College</td>
<td>Findings and Discussion on Hypothesis 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Description of Evaluative Tools</td>
<td>Findings and Discussion on Hypothesis 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Statistical Treatment</td>
<td>Findings and Discussion on Hypothesis 7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Summary of Hypotheses 1 through 8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hypotheses Related to Verbal and Non-Verbal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Performance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Findings and Discussion on Hypothesis 9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Findings and Discussion on Hypothesis 10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Findings and Discussion on Hypothesis 11</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Summary of Hypotheses 9 through 11</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Summary of Chapter IV</td>
</tr>
</tbody>
</table>

iii
V. SUMMARY AND IMPLICATIONS

Summary of the Experiment
  Treatment
  Criteria and Corresponding Tests
  Results
Implications of the Results
  Effect of the Experimental Program on Grade
  Point Average
  Effect of the Experimental Program on Verbal
  and Non-Verbal Aptitude, Values
Philosophical Justification of "High Risk" Programs
for College Students
Suggestions for Further Research

APPENDIX

BIBLIOGRAPHY
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>Results of &quot;T&quot; Tests on Differences Between the Experimental and Control Groups' GPA at the End of the First Trimester</td>
</tr>
<tr>
<td>II.</td>
<td>Results of &quot;T&quot; Tests on Differences Between the Experimental and Control Groups' GPA at the End of the Second Trimester</td>
</tr>
<tr>
<td>III.</td>
<td>Results of &quot;T&quot; Tests on the Difference Between Experimental Group First and Second Trimester Grade Point Averages</td>
</tr>
<tr>
<td>IV.</td>
<td>Results of &quot;T&quot; Tests on the Difference Between the Control Group First and Second Trimester Grade Point Averages</td>
</tr>
<tr>
<td>V.</td>
<td>Results of &quot;T&quot; Tests on Differences Between the Experimental and Control Groups' GPA at the End of the Third Trimester</td>
</tr>
<tr>
<td>VI.</td>
<td>Results of &quot;T&quot; Tests on Differences Between the Experimental and Control Groups' GPA at the End of the Fourth Trimester</td>
</tr>
<tr>
<td>VII.</td>
<td>Results of &quot;T&quot; Tests on Differences Between the Experimental and Control Groups' GPA at the End of the Fifth Trimester</td>
</tr>
<tr>
<td>VIII.</td>
<td>Results of &quot;T&quot; Tests on Differences Between the Experimental and Control Groups' GPA at the End of the Sixth Trimester</td>
</tr>
<tr>
<td>IX.</td>
<td>Data on Analysis of Covariance - SRA-Verbal</td>
</tr>
<tr>
<td>X.</td>
<td>Data on Analysis of Covariance - SRA-Non-Verbal</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION

The history of education in America is characterized by expansion both in depth and breadth.¹ A graphic description of this development might present a ladder of public education starting with schools geared to teaching elementary skills and ending with statewide systems for higher education. The newest rung on the ladder supports an ever-increasing enrollment of students in graduate and professional schools. In fact, there is considerable social commentary on the duration of contemporary formal education with a question about the effects of prolonging student status well into a chronological age generally associated with adult responsibilities. This increased emphasis on professionalization seems to be a by-product of the total socio-economic development in our highly industrialized and technological civilization.

Bisecting this vertical line representing the growth of education in depth is a horizontal projection depicting the increased spectrum of services assumed by public education. Among the various services delegated to the school system, one of the most awesome responsibilities is the role of 'equalizer of men' within a democratic tradition that proclaims that equality of opportunity is the incontestable right of all members of this society. Again historical treatise on

education in America depicts the expansion of services originally available only to an aristocratic elite to include every youth irrespective of socio-economic status. Until recently, this line of development ended with federal legislation guaranteeing a high school education to all.¹ Higher education, whether privately or publically endowed, has been restricted to students demonstrating above-average academic competence. Potential for college usually has been assessed by criteria such as aptitude tests and high school grades. Recently these criteria have been challenged, and it has been within the broad context of extension of higher education to students not heretofore possessing the paper credentials established by admissions offices that this research was undertaken.

DEFINITION OF TERMS

In the ensuing discussion, the following terms are used frequently and require definition to insure an interpretation that is consistent for the reader and researcher alike.

Socio-economic level. The basis for defining this term is Weber's concept of social class as a collectivity having

In common a specific causal component of their life changes, insofar as this component is represented exclusively by economic interest in the possession of goods and opportunities for income, and is represented under the conditions of the commodity of labor markets.²

Status. The term is herein defined as the relative position of the individual in society. The definition of this term is based less on a group's economic worth than on a shared perception of the group's "social honor." The latter, according to Mead, is awarded to a group both by its own members and others: One's "plan of action emerges out of a condition of awareness of other's expectations concerning the probability of one's engaging in a particular behavior." While deficient cognitive skills often are attributed to inadequate environmental stimuli, improper emotional set for learning often reflects a demeaning self-perception.

High risk. This term is used to specify the group of students challenging college admissions policy. The Southern Education Foundation describes "high risk" students as those whose

Lack of money, low standardized test scores, erratic high school records, and race/class/cultural characteristics, taken together, place them at a disadvantage in competition with the preponderant mass of students in the colleges they wish to enter.

Compensatory/supportive services. The terms, compensatory and supportive, are used interchangeably to refer to programs that attempt to respond to the background experiences typically influencing the academic potential of "high risk" students. A more detailed description of compensatory services for college students is found in Chapter II under a review of existing college programs.

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for the "high risk" group and in the discussion presented in Chapter III on specific procedures for this research.

**THE PROBLEM**

In its broadest and most philosophical sense, the problem presented in this study involves a step in the evolution of higher education in America: Should colleges and universities open their doors to a group of students who, according to college aptitude tests, have no chance or, at best, little chance for academic success under the traditional program? If the answer is "yes," the problem is narrowed to a consideration of administrative policy towards these students. A realistic appraisal of test scores and experimental background would suggest the need for a program of compensatory services for "high risk" students. It is in regard to these special services that this research focuses its attention. The specific problem then is best stated in terms of the following goals of the study:

1. Evaluate a compensatory program for "high risk" college students;

2. Describe changes in cognitive skills and attitudes that result from supportive education in college;

3. Determine some predictive criteria for future programs for "high risk" students.

To implement the preceding goals and hopefully to contribute some fuel to the philosophical debate over the inherent value of expanding higher education to include "high risk" students, a program of compensatory services for educationally and economically disadvantaged youth was established at Northeastern Illinois University. Within the context of this research, dual emphasis was placed on both cognitive and affective development as prerequisites of a successful program --- successful in terms of attaining the goals implicit in this group's
acceptance of the challenge of college --- and as an acknowledgement of their interrelatedness in influencing academic performance.

SUMMARY

This introduction has presented the problem of expanding the dimension of higher education to meet the needs of a sector of American society defined sporadically, with the precision characteristic of the social sciences, as culturally deprived, educationally and economically disadvantaged, low socio-economic group, and low status group. The primary purpose of the study has been stated as an attempt to investigate the outcome of a compensatory college program for students from educationally and economically deprived backgrounds.

Some allusions to the importance of this kind of research have been made. Research of this sort is significant, of course, as an attempt to solve a most pressing human problem in contemporary life. The riots in Detroit, in the Watts area of Los Angeles, in Washington, D. C., in Chicago, and in every metropolis with a large Black community and many small cities with comparatively few Blacks are testimonies to the active rebellion against educational and economic impoverishment. The proselytization of this social revolution provides the impetus to a whole body of literature and drama that harkens back to the 1900's commentaries on the exploitation of labor. The bitterness between the "haves" and the "have-nots" appears somewhat analogous for the two periods of history.

Again it seems to be a responsibility of education, as one of the most powerful institutions in our culture, to respond to the dynamic needs of a democratic society. It has both the responsibility to retain the best of the culture and to implement programs that test the validity of concepts that challenge tradition.
Thus far, the problem to be explored in this study has been discussed. Chapter II reviews the literature on existing college programs for "high risk" students and presents the results of studies concerned with both cognitive and personality development as they are related to socio-economic class. In Chapter III, the design and procedure for the research is presented. The latter includes an explanation of the treatment experienced by the experimental and control groups, a description of the instruments used to collect data on cognitive and attitudinal changes, and a discussion of the statistical procedures used to evaluate the significance of compensatory services. Next, Chapter IV examines the results of the statistical analysis of data. The relationship between treatment and changes in both academic skills and attitudes was studied by comparing pre- and post-test data. Grade Point Average was used to assess the relationship between actual academic performance and treatment. Finally, in Chapter V, the three basic goals of this study are summarized with reference to the statistical study of data presented in Chapter IV. An evaluation of compensatory education, as provided in this experiment, is discussed. Changes in attitudes or aptitude are treated with some implications for future "high risk" programs. A general statement on the philosophical justification of "high risk" programs completes this study.
CHAPTER II

REVIEW OF THE LITERATURE

Literature relevant to research on compensatory education for "high risk" students has been divided into three general categories. First, a review of programs already inaugurated in various colleges and universities helps to define the kinds of services denoted by the concept of compensatory education. It seems necessary to view the programs described with a wary eye, for the culmination of plans and principles conceived and reported with most honorable intentions sometimes is unrecognizable when witnessed from the vantage point of personal observation.

Second, a review of literature relevant to an understanding of the development of cognitive skills among youth reared in economically impoverished environments suggests some common deficiencies that create the necessity for supportive educational measures. Again there is a compulsion to warn against any gross generalizations. The individuality of each person within his environment must be kept in mind. However, the studies reported will indicate that a certain impoverishment of stimuli associated with academic prowess is often characteristic of low socio-economic status homes.

Third, a review of studies emphasizing the role of self-concept in academic achievement will be summarized. Without dwelling on psychological theories based on self-concept, it seems important to mention both experimental research and some of the subjective accounts of the effect of economic poverty and low social status on motivation and/or goal orientation.
All in all, the major portion of this review attempts to single out the dominant factors influencing academic performance of "high risk" students.

I. HIGH RISK PROGRAMS

In 1968, the Southern Education Foundation published a report on programs for "high risk" students inaugurated by various institutions. These schools had not been geared previously to the education of Negro students but represent colleges and universities that have been accessible primarily to those who meet both the financial and scholastic qualifications traditionally accepted as screening criteria. The Foundation sent a questionnaire to 215 institutions, out of which 162 schools replied. It was reported, however, that only 20 to 25 schools seem to have demonstrated an extensive effort to utilize all possible resources in a creative plan to meet the needs of these students.

A pertinent question for this research and one handled in different ways by the institutions to be discussed revolves around the kinds of services to be extended to "high risk" students. Some feel that special attention only serves to add to the stigma already perceived by many of these students. Others stress the necessity to overcome academic and economic handicaps by offering a program of supportive services. Hopefully, research will establish a body of facts to formulate a realistic rather than an idealistic answer to this question.

The plan for "high risk" students at Southern Illinois University is a good example of a program offering a high degree of specialized services. Starting in 1966, low-income, under-achieving young people from East St. Louis were encouraged

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1 Edgerton, op. cit.

to enroll in an Experiment in Higher Education. The Experiment included:

1. A completely redesigned curriculum heaving representing the two areas of social sciences --- humanities and the natural sciences;

2. A work-study program that employs students 10 to 20 hours per week. While classes are arranged on Monday, Wednesday, and Friday, Tuesday and Thursday are kept free for work experience;

3. A group of ten para-professionals to supplement the services of ten Southern Illinois University faculty members who teach part-time in the project. These para-professionals not only work closely with the students in the realm of academic requirements and counseling but also serve as role-models of successful Black people reared in the ghetto environment. The ratio of students to para-professionals is kept at ten to one;

4. A clinic for study skills that utilizes the latest in audio-visual materials;

5. The acceptance of a long range perspective with regard to attaining a C or better grade point average.

At least two years of supportive education was considered essential for the goal of academic success in a four year college program. Some 38 of the 100 students who started in the program have graduated.

The University of Wisconsin\(^1\) represents a different emphasis in supportive education for "high risk" students. Even though the course load is kept at a maximum of 12 hours for the first year, these students enroll in regular college courses. The main thrust of support is provided by an extensive tutorial program. Undergraduate honor students, who have volunteered their services, are trained as tutors by graduate students with college level teaching experience. Each graduate student is assigned as a supervisor to six "high risk" students and then is responsible for providing tutors and other necessary academic counseling for his assigned group.

\(^1\)University of Wisconsin, Operation Chance, Madison, Wisconsin
It seems significant that the director of the program at the University of Wisconsin has revised the original policy of minimizing the educational handicaps of "high risk" students. The original effort made not to identify the students as a unique group was rather unrealistic considering the fact that not quite one percent of the Madison branch of the University of Wisconsin is Black. Now, however, the academic deficiencies to be overcome are emphasized along with an expression of confidence in the students' ability to succeed by utilizing the special tutorial and supervisory services provided for them.

The University of California at Berkeley and Los Angeles has established an Educational Opportunity Program. Special provisions are complete financial assistance, intensive personal and academic counseling, lighter-than-normal course loads, optional remedial courses in language arts skills and study techniques, and extended time allotment for removal from academic probation status. Since this experiment is in the neophyte stage, it is too soon to judge its relative merits unless some striking statistics have been reported.

An observation made by the director of a "high risk" program at the University of Oregon is representative of another response to these students that affects the kind of support given to this group. Even though the University has instituted a policy and services similar, on paper, to that offered at the University of California, the director states that the program has been "only minimally effective" because of the lack of preparation for these students. He comments further that "many faculty resent their existence" and few instructors are interested in or trained to work efficiently with these young people.3

1University of California, Program for Disadvantaged, Berkeley, California.
2University of Oregon, Opportunity Program, Portland, Oregon.
3Edgerton, op. cit., p. 32.
At Michigan State University,¹ as at the University of Oregon, faculty involvement with the "high risk" program has not been extensive. However, the challenge to respond to new-felt needs in society has been met by the counseling department. A compensatory program with similar provisions as those offered at the University of Oregon and the University of California has been inaugurated. The emphasis at Michigan State University, however, appears to be on adequate counseling for these "high risk" students. Also, Michigan State University is a good example of the trend to offer pre-college preparatory programs during the summer preceding the freshman year. A debate exists about not only the merit of such experiences but the decision to make attendance in such programs voluntary or compulsory.

Still another group of schools has attempted to increase the enrollment of minority groups by extending both recruitment efforts and financial aid. However, this group of schools is distinguished by its desire to enroll students from disadvantaged backgrounds who have high school records and test scores predictive of success in college.

Among private institutions of higher education, Antioch College² has been a pioneer in recruiting "high risk" students. The uniqueness of its philosophy of education enhances innovation, for whole environment seems conducive to meeting the needs of individuals.

Groups of selectors (community leaders in ghettos of various cities) nominate for admission to Antioch "high risk" students whom they judge to be motivated and capable. Next, a group of nominees is invited to visit the school for a mutual screening. Upon enrolling at Antioch, these students have the advantage of highly individualized services in counseling, tutoring, and remedial courses offered to all Antioch students. As the college's curriculum is planned around a work-

¹Michigan State University, College Opportunity Program, East Lansing, Michigan. ²Antioch College, Interracial Project, Yellow Springs, Ohio.
study orientation, "high risk" people fit into the established pattern. The same is true of competing, in conventional sense, for grades. A student does not go on academic probation at Antioch; instead, courses are repeated until the expectations of the instructor are met. This relaxation of extrinsic motivators appears to succeed within an attitudinal framework expressed by Dixon Bush, the head of the Interracial Project at Antioch:

We do not ask these students, any more than we ask any other students, to forsake their antecedents ... We covet for them the gain of becoming more extensive rather than accomplishing a metamorphosis. We want them to become a part of the richness of our campus environment, teaching us from their experience, and learning from us what is new and useful to them.¹

The descriptions of "high risk" programs presented above are typical of the kinds of services being offered in many colleges and universities throughout the country. Momentum for these innovations came from many sources: The energies of minority group leaders, feelings of responsibility triggered by Martin Luther King, Jr.'s death, and indignation resulting from lassitude in carrying out legislative rulings on civil rights are a few of the more obvious impetuses to broadening the scope of higher education to include a hitherto excluded portion of the population.

Factors common to most "high risk" programs are:

1. Full financial aid or a combination of financial assistance and school sponsored work-study plans;

2. Modification of admissions criteria;

3. Reduced course load;

¹Edgerton, op. cit., p. 39.
4. Provisions for academic and personal counseling;
5. Tutoring and/or study skill aids.

Policies toward the following often are the crux of differences in compensatory programs:

1. Specially prepared curriculum versus regular college requirements;
2. Remedial and/or pre-college preparatory classes;
3. Voluntary versus mandatory acceptance of special services;
4. Areas of emphasis in the program;
5. Maintenance of C or above grade point average;
6. Duration of compensatory measures;
7. Predominant philosophy of education espoused by administration and faculty.

In discussing compensatory programs in higher education, D. A. Wilkerson observed that

Although the careful assessment of students' performance is frequent and practically universal on all levels of American education, the careful appraisal of educational programs is rare; and it is not surprising therefore, that very few of the compensatory programs in higher education have been systematically evaluated.\(^1\)

Hopefully, a discussion of these programs will at least stimulate an exchange of ideas about both compensatory education and the ideological and practical rationale for its existence.

No review of the literature on compensatory education would be complete without viewing New York's City University program of open admissions. The

\(^1\)D. A. Wilkerson, IRCD Bulletin from Ferkauf Graduate School, Yeshiva University, New York, March, 1966., p. 12.
raging controversy about admitting all high school graduates regardless of academic background began with the start of the program in 1970. Initially, 14% admitted were Black and Puerto Rican, increasing to 33% in 1971 and 1972. Most of the minority students were in need of remedial work. Tutoring was first attempted, along with a strong counseling program to provide information about courses and instructional methods. Credit-bearing remedial courses were provided as incentives to continue in the system. The effort intended to narrow the gap for minority enrollment in higher education, and it would appear that the effort in New York City began to succeed.

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<td>IN COLLEGE 1965 - 1972</td>
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<td>1965 %  1972 %</td>
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<tr>
<td>Black  10  18</td>
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<td>White  26  27</td>
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While the open admissions program was now in full swing, the critics began to become concerned about the cheapening of the degree.

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²Ibid.

In New York's Public Universities, we are cheapening the degree and pushing illiterates out, now with the B. A. degree.¹

Mr. Stack of the English Department at CUNY indicates:

In four years of operation, 32% were graduated and 12% still remain of the originally admitted group. The natural attrition and difficulty of the course work will act as a natural filter. True, our standards have eased, but who is to stand in judgment on where the line is to be drawn and the academic axe dropped.²

While the critics howled, a growing school of thought saw the benefits of total access to higher education and attempted to adjust the system to accommodate the innovation. Adjustment in the grading system was advocated to act as a retentive device.³ The failing grade was seen as a surefire method to eliminate the weak or slower learners. The pass-no credit method suggests that individuals need varying amounts of time to complete the requirements of a given course. By making the grading system more flexible, retention was hope­fully increased.⁴


⁴Ibid., p. 19.
II. STUDIES ON COGNITIVE DEVELOPMENT IN RELATIONSHIP TO SOCIO-ECONOMIC STATUS

Implicit in the act of reviewing literature on the cognitive development characteristic of "high risk" students is the assumption that a generalization confirming a problem in this area is basic to the concept of compensatory education. It seems relevant to state that on the one hand Kohlberg, a cognitive learning theorist, found evidence of retarded cognitive stages among the lower socio-economic group. And, on the other hand, he also wrote that one finding substantiated by research in learning theory can be quite often refuted by another piece of research in the same area. The studies that follow seem to substantiate the relationship between retarded cognitive skills and lower socio-economic status.

John studied certain patterns of verbal and cognitive behavior in Negro children from three social classes: lower-lower, upper-lower, and middle. An analysis of tests that measure use of language and tasks such as labeling, relating, and categorizing indicated that acquisition of more abstract and integrative language seems to be hampered by the living conditions in homes of lower class children. Opportunities for learning to categorize and integrate are rare in the lives of all young children. This type of learning requires specific feedback or careful tutoring.

Jensen reviewed studies concerning stimulation on both animal and human learning behavior. His own study suggests that objects presented within a

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verbal and tactile experience are discriminated more rapidly than objects presented only with a visual context.¹ Children from lower class homes, according to Deutsch, lack a variety of visual, tactile, and auditory stimulation. Deutsch's study found that functions for which race is associated with poor performance are in areas of abstraction, verbalization, and experimentally dependent enumeration. The deficiency is further pinned down to measures which reflect abstract and categorical use of language as opposed to labeling usage.²

To determine the effect of home environment on educational achievement, Dave studied school progress in terms of six variables:

1. Achievement press;
2. Language models in the home;
3. Academic guidance provided in the home;
4. Stimulation provided in the home to explore various aspects of the larger environment;
5. The intellectual interests and activity in the home;
6. The work habits emphasized in the home.

The overall index of the home environment had a correlation of .+80 with the total score on a battery of achievement tests. Correlations were highest with tests of work knowledge and reading and lowest in tests of spelling and

Milner investigated parent-child interaction as related to reading readiness. She found that all high scores but one in her sample were in the middle and upper classes. All low scores but one were in the lower class. Interviews with parents in the sample indicate that high scorers have a much richer verbal environment than low scorers, there are more books in the home, the children are read to more often, and they speak with parents at meals and other times.

Montague investigated social-class differences in arithmetic concepts in kindergarten children. He found a significant difference between classes on total score on the inventory administered to the sample. Lower socio-economic status pupils scored lower on subtests including enumerating quantitative relationships, symbol recognition, social usage, and problem solving.

Another study, by Hill and Giammatteo, suggests a correlation between socio-economic status and its relationship to vocabulary, reading comprehension, arithmetic skills, problem solving, and composite achievement scores. This study adds the idea of cumulative deficit with regard to achievement tests and age-grade level standards. Deutsch corroborates the thesis that

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The lower-class child enters the school situation so poorly prepared to produce what the school demands that initial failures are almost inevitable, and the school experience becomes negative rather than positively reinforced... The data seems to indicate that class differences in perceptual abilities and general environment orientation tend to decrease with age, while language differences tend to increase. If language is taken as prerequisite to concept formation and problem solving, then this deficit has tremendous effect at all levels of learning.

Again, when Krugman compared IQ and reading test scores for low socioeconomic students in third, sixth, and eighth grades, the deficit was found to increase at each grade level. And Osborne's longitudinal study of racial differences in mental growth and school achievement found a two year difference in mental age at grade six and a four grade difference at grade ten. "For the Negro group, achievement and mental maturity growth became negatively accelerated or leveled off in the 14 to 16 age range."3

Studies concerning "high risk" students draw the following conclusions:

1. Major factors in cognitive development are the quality of parental interaction with children and the objects in the home and the quantity of parental interest in learning; the amount of practice and encouragement the child is given in conversation and general learning have been found to be significant

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3P. T. Osborne, "Racial Differences in Mental Growth and School Achievement; a Longitudinal Study," Psychological Reports, 7, 1960, pp. 232-239.
influences on language and cognitive development, stimulation of interest in learning and attention span and motivation.

2. Most economically disadvantaged youth spend less time in direct interaction with their parents than do middle-class progeny. Also, the parents in deprived homes often do not have the skills or language to effectively use the time they spend with their children in fostering the kind of language and cognitive development requisite to school achievement.

3. Deficiencies in academic achievement due to a poverty of experiential stimuli accumulate to create a greater discrepancy between mental maturity and age-grade maturity.

III. STUDIES ON PERSONALITY DEVELOPMENT IN RELATIONSHIP TO SOCIO-ECONOMIC LEVEL

Available evidence on personality development of economically and educationally deprived youth seems to indicate that their ego development is characterized by a lack of self-confidence and negative self-image. This is particularly true for the Negro deprived child who suffers from a caste-like status and prejudice. Also, research on failure experienced early in school life shows negative effects on personality and subsequent achievement and aspiration.
patterns of future-time orientation and striving for delayed gratification are more common to middle-class students than to disadvantaged students. It might be noted that the motivational patterns of "high risk" students, particularly present-time orientation and reliance on immediate, often material rewards are adaptive to their life circumstances even though they are not facilitative in school.

Ausubel and Ausubel summarize the literature on ego development of the Negro children:

The ego development of segregated Negro children in the United States manifests various distinctive properties, both because Negroes generally occupy the lowest stratum of the lower-class sub-culture, and because they possess an inferior caste status in American society. Their inferior caste position is marked by an unstable and matrarchal type of family structure, by restricted opportunities of acquiring educational, vocational, and social status, by varying degrees of segregation from the dominant white majority, and by a culturally fixed devaluation of their dignity as human beings. The consequences of this regrettable state of affairs for Negro children's self-esteem and self-confidence, for their educational and vocational aspirations, and for their character structure, inter-personal relations, and personality adjustment, constitute the characteristic features of their ego development.

Beginning in the pre-school period, the Negro child gradually learns to appreciate the negative implications of dark skin for social status and personal worth. Hence he resists identifying with his own racial group and shows definite preference for white dolls and playmates. This reluctance to acknowledge his racial membership not only results in ego deflation, but also makes it difficult to identify with his parents and to obtain from such identification the deprived status that universally constitutes the principle basis for self-esteem during childhood. Much of the deprived

1W. Speller, personal communication.
status that white children obtain is made available to the Negro child by virtue of his membership in an unsupervised peer group, which accordingly performs many of the socializing functions of the white middle-class home. This is especially true for the Negro boy who often has no adult male with whom to identify in the frequently fatherless Negro family, and who finds maleness deprecated in his matriarchal and authoritarian home. Early experience in finding for himself results in precocious social maturity, independence, and emancipation from the home. During pre-adolescence and adolescence, segregated Negro children characteristically develop low aspirations for academic and vocational achievement. These low aspirations reflect existing social class and ethnic values, the absence of suitable emulatory models, marked educational retardation, restricted vocational opportunities, lack of parental and peer group support, and the cultural impoverishment of the Negro home. Because of loyalty to parents and rejection by the dominant white group, Negro adolescents develop ambivalent feelings toward middle-class achievement values and the personality traits necessary for their implementation. Girls tend to develop a more mature ego structure than boys, probably because of their favored position in the home.1

The feelings of degradation summarized so well by Ausubel and Ausubel often result in feelings of hostility. Fields writes that the frustration over repression of resentment and feelings of powerlessness to effect change are bound to affect need achievement.2 For many Negroes, "apathy, which served as a defense against the expression of hostility, was the salient personality characteristic."3


Kanfer found the evaluations of others (the experimenter) significantly affected the self-evaluation of the subjects in his experiment. A relationship between the experimenter's evaluation and the subjects' self-reinforcement was greater than the relationship between the subjects' self-appraisal and self-reinforcement.\(^1\)

In a theoretical paper on socialization and the adolescent personality, Davis presents the hypothesis that "successful socialization of the adolescent depends upon the degree of adaptive, or socialized anxiety which has been instilled in him by his society."\(^2\) Socialized anxiety leads to striving for rewards and concern over not obtaining appropriate rewards. In learning the culture of their group, middle-class adolescents are more deeply motivated to achieve than either lower or higher status adolescents. Ambition is an approved value in middle-class society; aggression is approved behavior in lower-class society.\(^3\)

Hieronymus gave 600 high school freshmen scales measuring socio-economic status, attitude toward education, and level of socio-economic expectation. Intelligence test scores and performance scores on the Iowa Test of Educational Development were also obtained for this sample. In his conclusion, Hieronymus states that: 1) socio-economic status is more closely related to the level of socio-economic expectation than is test intelligence; 2) the correlation coefficient between socio-economic status and attitude toward education is

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\(^3\) Ibid., pp. 198-216.
about .30; 3) a high correlation exists between socio-economic expectation and attitude; 4) a moderate relationship exists between the socio-economic expectation and attitude and composite scores on the Iowa Test of Educational Development.1

LeShon investigated the relationship between time orientation on social class. One hundred and seventeen children in the age bracket of 8 to 10 were asked to tell stories to the examiner. Stories of middle-class children were found to contain a longer time period for action than those of lower-class children. The difference was significant at the .001 level. Thus, the author suggests that the lower-lower class has very short term goals aimed at immediate relief of tension. The upper-lower and middle classes accept longer tension-relief sequences in planning for long term goals.2

In studying the problem of trust, Mischel, in a study conducted in Trinidad, found a relationship between delayed reinforcement and social responsibility. With a sampling of 136 Negro children from an elementary government school and 70 boys from an industrial school for juvenile delinquents, he found that delinquents showed greater preference for immediate smaller reinforcements, and that lower social responsibility scores tended to be related to preferences for immediate smaller rewards.3

The qualitative accounts of personality development submitted in the form


of fiction also serve to corroborate Ausubel's and Ausubel's comprehensive statement on personality factors that could influence academic performance in members of the low socio-economic group. The Fire Next Time, The Autobiography of Malcolm X, The Confessions of Nat Turner, Black Rage are a few of the literary attempts to depict life as a Negro in America. Two themes pervade these creative expressions. The first is anger: Overt, repressed, cruel, subtle, outer-directed, or inner-directed anger is the tragic flow that consumes the protagonists in Black Literature. A second major theme is the intense groping for personal and cultural identity within a multicultural society. This identity crisis has been defined by Erikson as a most significant stage in personality development. In discussing Erikson's theory, as it relates to minority groups from low socio-economic backgrounds, Kincaid writes that "the young person seeks to define a social role for himself that agrees with his perception of the ways others view him." When the expectations of family and community conflict, when role models are impotent and a

source of embarrassment, when derogatory connotations depict a particular social milieu, then role confusion results and is handed down from one generation to another. The group self-concept is contagious, but there is no vaccine to fight the disease.

Pulling together the conjoint importance of self-concept identity perception and cognitive development, McClelland describes the unique characteristics of achievement motivation:

Clearly, the expectations are built out of universal experience with problem-solving ... with learning to walk, talk, read, write, sew, perform chores, etc. The expectations also involve standards of excellence with respect to such tasks. The child must begin to perceive performance in terms of standards of excellence so that discrepancies of various sorts from this perceptual frame of reference ... can produce positive or negative affect. The surest sign of such a frame of reference is evaluation of a performance. What then becomes crucial ... for achievement motivation is detecting affect in connection with evaluation.¹

Studies done of both cognitive and affective development of high risk students by several segments of the counseling and psychological community at the University of Illinois at Urbana all point to one salient factor. High risk students persist and progress as well as other students; however, their performance is clearly below that of the typical student.²

In Dr. Faite R-P. Mack's study on the relationship between the characteristics of persisters and non-persisters in an educational opportunity


program, he points up that the fantasy student who lives only in the imagination of the professor and dropout factors are quite closely related between the typical and high risk student. The study further finds the background and preparation of the high risk student less significant a factor for persistence than the school's ability to provide a climate of understanding for the minority group.

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2 Ibid.
CHAPTER III

DESIGN AND PROCEDURE

The general plan for this study was to evaluate a program of compensatory education for "high risk" college students, to describe changes in academic potential that result from supportive education, and to establish predictive criteria for future programs for "high risk" students. This section will describe the procedure and design for this project.

I. SAMPLE

In September, 1968, 27 "high risk" students entered the freshman class at Northeastern Illinois State College (NISC). This institution, now renamed Northeastern Illinois University (UNI), is an offshoot of the Normal School founded in 1869. Formerly Chicago Teachers College, it was a part of the Chicago Public School System until 1965 when it was taken over jurisdictionally by the State. At its present Northwest side location in Chicago since 1961, Northeastern has undergone four different name changes since 1965:

1) Chicago Teachers College - North ... 1961-1965
2) Illinois Teachers College, Chicago North ... 1965-1967
3) Northeastern Illinois State College ... 1967-1971
4) Northeastern Illinois University ... 1971-present

Until 1967, the sole function of the college was to prepare elementary school teachers. In 1967 the college added Liberal Arts and Secondary Education and
thus became a multi-faceted college. Further expansion in the Liberal Arts and, in 1974, to the business field has moved Northeastern to a functioning and innovative university.

Exemplifying the innovational spirit at Northeastern is the sample group whose vital statistics at the time of matriculation are as follows:

1. Sex: 18 females and 9 males
2. Race: 22 Black, 3 White, 2 Puerto Rican
3. Marital Status: 26 unmarried, 1 married
4. Mean Age: 18 years
5. Age Dispersement: 26 under 19 years, 1 over 19 years
6. Mean ACT Composite Score: 13.5 with a scatter from 10 to 17
7. Financial Status: Need analysis resulted in maximum financial aid of $1500 for 26 students and $800 for 1 student

Screening criteria were referrals by personnel affiliated with the Upward Bound program\(^1\) and high school counselors and/or recommendations by counselors working in Northeastern's Office of Admissions and Office of Financial Aids. Students who met the general criteria of high risk with regard to socio-economic status and eligibility for college admissions also were screened on subjective criteria such as motivation and declared goals. High school records, both academic and extra-curricular, were considered. Even though the "high risk" students did not meet entrance test standards, many ranked in the upper half of

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\(^1\)Upward Bound Program, a federally funded project for disadvantaged high school students to promote admission to colleges and universities.
their high school graduation class. Participation in clubs, athletic events, community sponsored activities, and creative endeavors were noted also. In summary, screening personnel made a recommendation based on:

1. Individual interviews geared toward an assessment of the prospective student's goals, interests, and motivation;
2. Experience with the students in a formal high school structure;
3. Experience with the students in the specialized tutoring relationship offered by the Upward Bound program;
4. Knowledge of the student's high school record in academic subjects and extra-curricular activities.

The effort to establish the validity of compensatory services planned for "high risk" students resulted in the inclusion of a control group of 23 students who would be as close as possible to the experimental group with regard to the vital statistics listed above. The members of the control group came from the same set of inner city schools as the experimental group; however, the input bias is obvious from the following description of the control group:

1. Sex: 18 females, 5 males
2. Race: 5 White, 11 Black, 6 Spanish origin, 1 Oriental
3. Marital Status: 23 unmarried
4. Mean Age: 18 years
5. Age Dispersement: All under 19
6. Mean ACT Composite Score: 19.0 with a scatter from 14 to 24

7. Financial Status: 1 with maximum $1500 in aid, 14 with full tuition scholarships ($78 per trimester), and 7 with no financial assistance

II. TREATMENT

Based on the hypothesis that both cognitive and affective development influence academic performance, compensatory services for the experimental group were prescribed with the object of combatting deficiencies in both these areas.

To effect the development of cognitive skills, the following procedures were implemented:

1. Summer school tutoring in the areas of language arts and mathematics was offered on a free and voluntary basis. The tutors used in the summer school program had experience in teaching remedial courses in reading and math. These tutors were a part of Northeastern's work-study program for undergraduate students who maintain at least average (C) grades and who, in this case, expressed an interest in teaching and had an above average aptitude in the subject being taught. The emphasis in the language arts program was on reading skills. Of the 13 students who chose to participate in this program, 5 attended on a regular basis and 8
attended classes sporadically.

2. A selection of five programs, each with 12 hours of class time a week, was prepared and submitted to each student in the experimental group for his preference. These programs were characterized by a balance in the kinds of cognitive skills required for successful academic performance. Each included a basic course in mathematical concepts and an introductory course in psychology. The emphasis in the former was on teaching the logic underlying abstract principles in mathematics. The thrust of the psychology course was towards offering experiences in a classroom that promote an understanding of behavior. Four of the programs included an introductory art course that provided opportunities for self-expression with a variety of materials and a weekly lecture in art history. Four programs included the freshman literature-writing course in which various selections in fiction were analyzed and interpreted through class discussion and creative writing. One program included a survey type course in geography that was part of the school's social-studies requirements. One program included the basic speech course which was part of general curriculum requirements. Northeastern instructors are free to experiment with class content and methods of presenting material. Therefore, the exact content or emphasis in
each course cannot be itemized. The typical programs, however, included math concepts, art, literature-writing, and psychology.

3. The attitudes, skills, and concerns of the faculty members were also considered in preparing programs for the experimental group. Although administrative policy fully supported experimentation with compensatory education, faculty opinion represented a diversity inherent to democratic institutions. Therefore, "high risk" students were placed in classes with instructors who expressed an interest in this group and who welcomed the challenge represented by these students.

4. A counselor was hired for the express purpose of providing close supervision for the experimental group. He was to function as a counselor for both academic and personal problems, as a liaison between student personnel services and faculty, and the general administrator for the program.

The following provisions in the program reflect concern with the dynamics of personality development as they relate to academic success:

1. "High risk" students were placed in a regular rather than in a specially prepared curriculum. In this way, the members of the group were not singled out in the perceptions of the general
student body or in their own eyes as recipients of "preferential treatment" or "charity." On the other hand, each member of the experimental group was made aware of particular deficiencies in academic skills as compared to the norms established for Northeastern students. Standardized scores on the American College Test and the Triggs Diagnostic Reading Test were interpreted to groups of five students. The relevancy of normative data was discussed, terms such as percentile were explained, and the implications of these test results as tools for realistic academic planning were presented. An understanding of academic strengths and weaknesses in comparison to the student population at Northeastern was considered an important step in helping members of the "high risk" group assume responsibility for their progress in college.

2. No more than five students from the experimental group were in a class together. The logic of the Supreme Court decision against the concept of "separate but equal" education was incorporated into the guidelines for this project. Again, separate classes would set the group apart and would deprive them of realistic competition with a heterogeneous composite of peers.
3. Based on the theory of social learning proposed by Bandura and Walters,¹ the counselor for the experimental group was selected not only for his ability to function as an advisor in the traditional sense but also to serve as a role model for the students in the experimental group. Because 22 of the 27 students in the experimental group were Black, it seemed important to have a Black counselor who, as a member of the Black race, represented academic achievement, vocational success, and full identification with his heritage. Academically qualified Black applicants were interviewed both by members of the Department of Student Personnel Services and a representative group of Negro students attending Northeastern. Interestingly, the students' criteria for choosing the counselor, although couched in different terminology, were empathy and congruency.

4. Within the structural framework described in the discussion of balanced programs for the experimental group, "high risk" students met in groups of five with a member of the counseling staff to choose programs that coincided with needs and interests. Some found time schedules most important and chose classes

¹A. Bandura and R. Walters, Social Learning and Personality Development (Chicago: Rinehart and Winston, Inc., 1967).
that allowed free time blocks to meet various obligations. One, who felt some concern about speech patterns, chose the speech course. Others, interested in majoring in history, started the social studies sequence. As all of the courses offered were part of the required core curriculum at Northeastern, no class was superfluous in meeting graduation requirements.

5. The value of academic pursuits and the consideration of long term vocational goals was reinforced by the counselor's verbal invitation to meet with the "high risk" students, both in small groups and individually, to encourage their goal-oriented pursuits. With the official beginning of classes, this invitation was structured into small group sessions that met on a regular weekly basis. As the immediate concerns of the students set the format and subject matter of these group discussions, duplication of the content, for the purpose of experimental validation, is impossible. However, a primary goal of the counselor was to provide a climate that encouraged motivation to achieve academically. Probably 'eclecticism' is the best term to describe the approach to implementing this goal.
The preceding list of implementations for supportive education were carried out only the first trimester of the experimental group's freshman year at Northeastern. For the second trimester, and ensuing trimesters, however, certain of these treatment procedures were eliminated. Within the limits imposed for program selection for all freshmen at Northeastern, the members of the experimental group assumed full responsibility for planning their programs. Any limitations on course selection were the natural outgrowth of Northeastern's registration policy based on priority in registration according to number of hours completed in college.

A typical course load at Northeastern is 15 hours with a regulation that students with a B or better average generally may receive permission to take extra hours. Balanced programs, reduced course load, and preferred instructors were no longer part of the treatment experienced by the experimental group during any trimester beyond the first term. In fact, the consequence of freshman status on course selection is characterized by a limited choice of subjects that often are considered undesirable by the upper-classmen because of 'reputation' or scheduled time of the class. This situation changed visibly when a new, more loosely structured required sequence of courses was instituted in 1969. The only tangible major supportive element that remained from the first trimester was the counselor in charge of supervising the group.

The control group received the same treatment as all freshmen at Northeastern. From admission through the first day of class, the procedure was as follows:

1. An application for admission to Northeastern was made through the Office of Admissions. Acceptance was determined by a minimum American College
Test Composite Score of 21 and a rank in the upper half of the high school graduation class. There is some flexibility in this policy (high college entrance examination score and low class rank, for example), but most freshmen meet both qualifying criteria. The American College Test has been eliminated as an admissions criterion since 1971 as it has not proven to be a valid predictor of academic success.

2. The Office of the Registrar assigned each new student to one of the various prearranged programs prepared by the Registrar's Office. These schedules were sent to incoming freshmen through the mail. Any major changes in a program, such as substitution of one course for another, are permitted during the first week of each trimester and are dependent on the supply and demand principle after most of the college's most desired courses have been filled.

3. An orientation program was conducted for all new students providing a formal instruction to important administrative and faculty personnel, review of student personnel services available, and a thorough briefing on the University's physical plant facilities and extra-curricular aspects of student life.
4. A social hour, permitting informal mixing of faculty, administration, and students, climaxed the incoming students' initiation to Northeastern's campus.

5. The control group was able to avail itself of the same services as were available to the experimental group.

In summary, the design for this research included (a) an experimental group of 27 "high risk" students who received special treatment for the first trimester in college and who were observed with respect to academic performance measured by grade point average following this experience; (b) the same experimental group as above who were deprived of certain supportive measures the second and ensuing trimesters in college and then observed for academic performance as determined by grade point average following this experience; (c) a control group of students from the same formal educational background who received no special treatment any term and were observed for academic performance as measured by grade point average at the end of each trimester in college; (d) a program of pre- and post-testing for both groups to describe changes in attitude and cognitive aptitude that might be attributed to the experimental treatment.
III. HYPOTHESIS

The following null hypotheses were derived from the stated purpose of the experimental program and this thesis.

**Hypothesis 1.** There is no difference in the mean grade point averages for the experimental group and control group at the end of the first trimester.

**Hypothesis 2.** There is no difference in the mean grade point averages for the experimental group and control group at the end of the second trimester.

**Hypothesis 3.** There is no difference in the mean grade point averages achieved by the experimental group for the first and second trimesters.

**Hypothesis 4.** There is no difference in the mean grade point averages achieved by the control group for the first and second trimesters.

**Hypothesis 5.** There is no difference in the mean grade point averages for the experimental group and control group at the end of the third trimester.

**Hypothesis 6.** There is no difference in the mean grade point averages for the experimental group and control group at the end of the fourth trimester.

**Hypothesis 7.** There is no difference in the mean grade point average achieved for the experimental group and control group at the end of the fifth trimester.

**Hypothesis 8.** There is no difference in the mean grade point averages for the experimental group and the control group at the end of the sixth trimester.
Hypothesis 9. There are no differences between the experimental and control groups' mean performance on the SRA-Verbal.

Hypothesis 10. There are no differences between the experimental and control groups' mean performance on the SRA-Non-Verbal.

Hypothesis 11. There are no differences between the experimental and control groups' mean performance on the following values as measured by the SRA-Survey of Interpersonal Values:

a. Support
b. Conformity
c. Independence
d. Benevolence
e. Recognition
f. Leadership

IV. DATA GATHERING

Data on the experimental and control groups was collected in testing sessions conducted before the September 1968 school year and after four trimesters in college were completed. All instruments to be described were used in both the pre- and post-testing.

Measures of Aptitude: The devices chosen for testing served two purposes. First, the following tools were used to objectively measure intellectual aptitude and achievement:

Science Research Associates Verbal Form (SRA-V)
Science Research Associates Non-Verbal Form (SRA-NV)

Even though the use of tests has been criticized as "culture bound" for determining the intellectual potential of "high risk" students, these tests
serve to measure potential for successful performance within an educational structure geared to middle class values and competencies. It was necessary to establish a baseline of equivalency for the two groups on factors measured by these aptitude tests and then to determine group difference by computing deviation from the baseline.

Measure of Academic Success in College: The final evaluation tool was grade point average. Mean grade average (GPA) and scatter were analyzed for the experimental and the control group at the end of each of the six trimesters studied. Difference with a group for six trimesters and between the two groups at the end of each trimester were determined. The significance of actual academic performance as measured by GPA takes on considerable importance in determining the effect of compensatory services when Munday's statement about aptitude and achievement test scores is examined:

Experience to date indicates that these initial low scores on aptitude tests for the disadvantaged are not going to change much, no matter how ... well done the special program is ... We are wrong in our thinking if we believe disadvantaged students are latent high achievers only waiting for the propitious moment to bloom. Well-developed educational programs achieve small to moderate gains under the best circumstances.

Description of Evaluation Tools: A description of the instruments used in this study and the factors measured by each instrument follows:

SRA-V: The SRA-V is a group intelligence test that purports to measure general intelligence. The SRA-V manual defines general intelligence as the "ability to learn, to solve problems, to foresee and plan, to think quickly and creatively."¹ This test is heavily weighted with vocabulary and abstract thought problems. In this respect, the content appears analogous to the traditional intelligence tests, frequently considered worthless as measures of innate learning ability for members of the lower socio-economic class.

SRA-NV: The SRA-NV is useful as a check for the cultural bias found in most intelligence tests. It is considered a tool in measuring the intelligence of students with reading problems and/or cultural backgrounds that deviate from the norm for college students. Ability to reason out differences in pictured objects is measured. The test is based on the principle that "recognition of differences is basic to learning ability."²

Using both the SRA-V and the SRA-NV will likely provide a more reliable evaluation of ability to learn than using only a test such as the SRA-V,

²Ibid.
which emphasizes verbal skills. Both the correlation between verbal and non-verbal intelligence test scores and the correlation between each of these tests and GPA will be analyzed.

V. STATISTICAL TREATMENT

Hypotheses 1 - 11

A "t" test for small independent samples was used to test Hypotheses 1, 2, 5, 6, 7, and 8. A "t" test for small dependent correlated samples was used to test Hypotheses 3 and 4.

Because the treatment procedure was changed for the experimental group in its second trimester of college, grade point averages were available for the same group experiencing two types of treatment and for two separate groups --- one receiving special services during the academic year and the other treated in the traditional manner for Northeastern freshmen. The treatment of the experimental group in two different ways led to speculation concerning the Hawthorne effect, as it relates to educationally and economically deprived students; the concept of deprivation, in reference to various programs for underprivileged; and the theory of consistency of treatment, as it influences personality development.

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CHAPTER IV

RESULTS OF STATISTICAL ANALYSIS

Based on the procedures described in Chapter III, this chapter presents the findings of the statistical analyses made of the past treatment data. The results were examined and reported as they relate to the hypotheses listed in Chapter III. First, the results of "t" tests measuring the past treatment data on grade point averages (Hypotheses 1 - 8) were analyzed for differences between the experimental and control groups and within each of these groups. Second, results of an analysis of covariance on measures of verbal and non-verbal performance (Hypotheses 9, 10, 11) were analyzed for differences between the experimental and control groups. The following discussion was organized in direct relationship to each hypothesis presented in this thesis.

I. HYPOTHESES RELATED TO GRADE POINT AVERAGE

Hypothesis 1. There is no difference in the mean grade point averages for the experimental group and control group at the end of the first trimester.

Findings: The mean GPA for the control group (Group One) for the first trimester in college was 3.52, and the mean GPA for the experimental group (Group Two) for the first trimester in college was 3.63. A "t" test for small independent samples was completed to measure the significance of difference between Group One and Group Two with respect to GPA at the end of the first trimester.
trimester in college. Results are reported in Table I. Hypothesis 1, stating that there is no difference in the mean grade point averages for the experimental group and control group at the end of the first trimester, is therefore rejected.

Discussion: During the first trimester, the experimental group experienced the compensatory services planned for an experimental program for "high risk" college students.

TABLE I
RESULTS OF "T" TESTS ON DIFFERENCES
BETWEEN THE EXPERIMENTAL AND CONTROL GROUPS' GPA
AT THE END OF THE FIRST TRIMESTER

<table>
<thead>
<tr>
<th></th>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 22</td>
<td></td>
<td>N = 22</td>
</tr>
<tr>
<td>M = 3.6</td>
<td></td>
<td>M = 2.4</td>
</tr>
<tr>
<td>SD</td>
<td>0.79</td>
<td></td>
</tr>
<tr>
<td>SED</td>
<td>0.17</td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>t</td>
<td>-7.14</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>Significant difference</td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis 2. There is no difference in the mean grade point averages for the experimental group and control group at the end of the second trimester.

Findings: A "t" test for small independent samples was completed to measure the significance of difference between Group One and Group Two with respect to GPA at the end of the second trimester in college. Results are reported in Table II. The difference in the GPA of 3.69 for the control group and 2.40 for the experimental group is significant at the .01 level of significance. Therefore, hypothesis 2, stating that there is no difference between
the mean grade point average for the two groups at the end of the second trimester, is rejected.

**Discussion:** While the GPA for the control group went from 3.52 to 3.69, the mean GPA for the experimental group went from 3.63 to 2.40. During the second trimester, all supportive services that manipulated the academic programs of subjects in the experimental group were deleted. Only the emotional support of the counselor, employed for the specific purpose of working with the "high risk" students, remained as a special service to these students.

**TABLE II**

RESULTS OF "T" TESTS ON DIFFERENCES BETWEEN THE EXPERIMENTAL AND CONTROL GROUPS' GPA AT THE END OF THE SECOND TRIMESTER

<table>
<thead>
<tr>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
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<tbody>
<tr>
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<td>N = 25</td>
</tr>
<tr>
<td>M = 2.40</td>
<td>M = 3.69</td>
</tr>
<tr>
<td>SD</td>
<td>.207</td>
</tr>
<tr>
<td>SED</td>
<td>.2389</td>
</tr>
<tr>
<td>df</td>
<td>47.</td>
</tr>
<tr>
<td>t</td>
<td>6.23</td>
</tr>
<tr>
<td>p</td>
<td>.01</td>
</tr>
</tbody>
</table>

**Hypothesis 3.** There is no difference in the mean grade point averages achieved by the experimental group for the first and second trimesters.

**Findings:** A "t" test for small dependent correlated samples was completed to measure the significance of difference between first and second trimester GPA within the experimental group. The results of this test are reported in Table III. The difference between the mean grade point average of 3.63 for the first trimester and 2.40 for the second trimester was significant at the
.01 level of significance. Therefore, hypothesis 3, stating that there is no difference in the mean grade point averages achieved by the experimental group for the first and second trimesters, was rejected.

Discussion: Table II in the Appendix presents the elementary data basic to the "t" test used to appraise hypothesis 3. Shaffer wrote that some studies "use statistics like a lamppost --- more for support than illumination." This data shows the differences in GPA for the first and second trimesters with striking clarity. In comparison to the first trimester, 20 GPA's declined and 2 improved. On a five point grading scale, 2 subjects were below a "c" average for the first trimester, and 16 subjects were below a "c" average for the second trimester.

**TABLE III**

RESULTS OF "T" TESTS ON THE DIFFERENCE BETWEEN EXPERIMENTAL GROUP FIRST AND SECOND TRIMESTER GRADE POINT AVERAGES

<table>
<thead>
<tr>
<th></th>
<th>1st Trimester</th>
<th>2nd Trimester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Subjects</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>Mean Scores</td>
<td>03.7</td>
<td>02.4</td>
</tr>
<tr>
<td>Standard Deviations</td>
<td>00.7</td>
<td>00.8</td>
</tr>
<tr>
<td>Standard Error of Means</td>
<td>00.2</td>
<td>00.2</td>
</tr>
<tr>
<td>Difference between Means</td>
<td>1.3</td>
<td></td>
</tr>
<tr>
<td>Correlation between Initial and Final Scores</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>SED</td>
<td>0.18</td>
<td></td>
</tr>
<tr>
<td>t</td>
<td>7.22</td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>21.00</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>0.01</td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis 4. There is no difference in the mean grade point averages achieved by the control group for the first and second trimesters.
Findings: A "t" test for small dependent correlated samples was completed to measure the significance of difference between mean GPA for the first and second trimesters within the control group. The results of this test are reported in Table IV. The difference between the mean grade point average of 3.52 for the first trimester and 3.69 for the second trimester was not significant. In fact, the correlation coefficient is .97 as shown in Table IV. Therefore, hypothesis 4, stating that there is no difference in the mean grade point averages achieved by the control group for the first and second trimesters, is accepted.

Discussion: Table III in the Appendix presents the elementary data basic to the "t" test used to appraise hypothesis 4. In comparison to the first trimester, 9 GPA's declined, 14 improved, and 2 remained the same. On a five point grading scale, 23 subjects in the control group attained a "c" or better average for the first trimester, and 24 attained a "c" or better average for the second trimester.

### TABLE IV

<table>
<thead>
<tr>
<th></th>
<th>1st Trimester</th>
<th>2nd Trimester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Subjects</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Mean Scores</td>
<td>3.5</td>
<td>3.7</td>
</tr>
<tr>
<td>Standard Deviations</td>
<td>.6</td>
<td>.7</td>
</tr>
<tr>
<td>Standard Error of Means</td>
<td>.13</td>
<td>.17</td>
</tr>
<tr>
<td>Difference between Means</td>
<td>.17</td>
<td></td>
</tr>
<tr>
<td>Correlations between Initial and Final Scores</td>
<td>.97</td>
<td></td>
</tr>
<tr>
<td>SED</td>
<td>.0025</td>
<td></td>
</tr>
<tr>
<td>t</td>
<td>39.</td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>24.</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>.0001</td>
<td></td>
</tr>
</tbody>
</table>
Hypothesis 5. There is no difference in the mean grade point averages for the experimental group and control group at the end of the third trimester.

Findings: A "t" test for small independent samples was completed to measure the significance of difference between Group One and Group Two with respect to GPA at the end of the third trimester in college. Results are reported in Table V. The difference in the GPA of 3.75 for the control group and 3.08 for the experimental group is significant at the .01 level of significance. Therefore, hypothesis 5, stating that there is no difference between the mean grade point average for the two groups at the end of the third trimester, is rejected.

Discussion: While the GPA for the control group changed from 3.69 to 3.75, the mean GPA for the experimental group rose rather significantly from 2.40 to 3.08. The total supportive program for this "high risk" group remained the same as for their second trimester; namely, the emotional support of the counselor. It must be noted that 5 from the experimental group dropped out during the third trimester, contributing to a higher mean GPA.

TABLE V

RESULTS OF "T" TESTS ON DIFFERENCES BETWEEN THE EXPERIMENTAL AND CONTROL GROUPS' GPA AT THE END OF THE THIRD TRIMESTER

<table>
<thead>
<tr>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 17</td>
<td>N = 24</td>
</tr>
<tr>
<td>M = 3.08</td>
<td>M = 3.75</td>
</tr>
<tr>
<td>SD</td>
<td>0.1948</td>
</tr>
<tr>
<td>SED</td>
<td>0.3618</td>
</tr>
<tr>
<td>df</td>
<td>40.0</td>
</tr>
<tr>
<td>t</td>
<td>3.44</td>
</tr>
<tr>
<td>p</td>
<td>0.01</td>
</tr>
</tbody>
</table>
Hypothesis 6. There is no difference in the mean grade point averages for the experimental group and control group at the end of the fourth trimester.

Findings: A "t" test for small independent samples was completed to measure the significance of difference between Group One and Group Two with respect to GPA at the end of the fourth trimester in college. Results are reported in Table VI. The difference in GPA of 3.65 for the control group and 3.36 for the experimental group is not significant. Therefore, hypothesis 6, stating that there is no difference between the mean grade point averages for the two groups at the end of the fourth trimester, is rejected.

Discussion: While the mean GPA for the control group went from 3.75 to 3.65, the mean GPA for the experimental group rose from 3.08 to 3.36, due to the remaining 16 continuing "high risk" students with the higher GPA's. Again, no additional supportive services were available to the experimental group.

TABLE VI

RESULTS OF "T" TESTS ON DIFFERENCES BETWEEN THE EXPERIMENTAL AND CONTROL GROUPS' GPA AT THE END OF THE FOURTH TRIMESTER

<table>
<thead>
<tr>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 16</td>
<td>N = 24</td>
</tr>
<tr>
<td>M = 3.36</td>
<td>M = 3.65</td>
</tr>
<tr>
<td>SD 0.2307</td>
<td></td>
</tr>
<tr>
<td>SED 0.2841</td>
<td></td>
</tr>
<tr>
<td>df 39.0</td>
<td></td>
</tr>
<tr>
<td>t 1.26</td>
<td></td>
</tr>
<tr>
<td>p no difference</td>
<td></td>
</tr>
</tbody>
</table>
Hypothesis 7. There is no difference in the mean grade point averages achieved for the experimental group and control group at the end of the fifth trimester in college.

Findings: A "t" test for small independent samples was completed to measure the significance of difference between Group One and Group Two with respect to GPA at the end of the fifth trimester in college. Results are reported in Table VII. The difference in the GPA of 3.68 for the control group and 3.19 for the experimental group is significant at the .05 level of significance. Therefore, hypothesis 7, stating that there is no difference between the mean grade point average for the two groups at the end of the fifth trimester, is rejected.

Discussion: While the GPA for the control group rose from 3.65 to 3.68, the mean GPA for the experimental group fell from 3.36 to 3.19. Of the remaining 16 experimental students, 12 maintained an overall "c" average while 4 were below the "c" average necessary to remain in good academic standing. Of the original 25 control students, 24 were still attending at the close of their fifth trimester in college. All of the control group had an overall average of "c", thus enabling them to continue in good standing.

Hypothesis 8. There is no difference in the mean grade point average for the experimental group and the control group at the end of the sixth trimester.

Findings: A "t" test for small independent samples was completed to measure the significance of difference between Group One and Group Two with respect to grade point average at the end of the sixth trimester in college. Results are reported in Table VIII. The difference in the grade point average of 3.68 for the control group and 2.97 for the experimental group is significant at the .01 level of significance. Therefore, hypothesis 8, stating that
there is no difference between the mean grade point average for the two groups at the end of the sixth trimester in college, is rejected.

Discussion: While the GPA for the control group remained static at 3.68, the mean GPA for the experimental group fell from 3.19 to 2.97.

### TABLE VII

RESULTS OF "T" TESTS ON DIFFERENCES BETWEEN THE EXPERIMENTAL AND CONTROL GROUPS' GPA AT THE END OF THE FIFTH TRIMESTER

<table>
<thead>
<tr>
<th></th>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>16</td>
<td>24</td>
</tr>
<tr>
<td>M</td>
<td>3.19</td>
<td>3.68</td>
</tr>
<tr>
<td>SD</td>
<td>0.2461</td>
<td></td>
</tr>
<tr>
<td>SED</td>
<td>0.2791</td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>40.0</td>
<td></td>
</tr>
<tr>
<td>t</td>
<td>1.99</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>0.05</td>
<td></td>
</tr>
</tbody>
</table>

### TABLE VIII

RESULTS OF "T" TESTS ON DIFFERENCES BETWEEN THE EXPERIMENTAL AND CONTROL GROUPS' GPA AT THE END OF THE SIXTH TRIMESTER

<table>
<thead>
<tr>
<th></th>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>13</td>
<td>22</td>
</tr>
<tr>
<td>M</td>
<td>2.97</td>
<td>3.68</td>
</tr>
<tr>
<td>SD</td>
<td>0.2177</td>
<td></td>
</tr>
<tr>
<td>SED</td>
<td>0.2044</td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>34.0</td>
<td></td>
</tr>
<tr>
<td>t</td>
<td>3.26</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>0.01</td>
<td></td>
</tr>
</tbody>
</table>
SUMMARY OF HYPOTHESES ONE THROUGH EIGHT

Based on "t" tests for small independent groups, the following conclusions were made:

1. Hypothesis 1 was accepted: There were no appreciable differences in the mean GPA between the control and experimental groups for the first trimester.

2. Hypothesis 2 was rejected: There were significant differences between the control and experimental groups for the second trimester.

Based on "t" tests for small dependent correlated groups, the following conclusions were made:

1. Hypothesis 3 was rejected: There were significant differences between first and second trimester GPA's for the experimental group.

2. Hypothesis 4 was accepted: There were no significant differences between first and second trimester GPA's for the control group.

Based on "t" tests for small independent groups, the following conclusions were made:

1. Hypothesis 5 was rejected: There were significant differences between the control and experimental groups for the third trimester.

2. Hypothesis 6 was rejected: There were significant differences between the control and experimental groups for the fourth trimester.
3. Hypothesis 7 was rejected: There were significant differences between the control and experimental groups for the fifth trimester.

4. Hypothesis 8 was rejected: There were significant differences between the control and experimental groups for the sixth trimester.

Variables that seemed to be related to the academic performance of both groups were:

1. The significant difference in grade point average between the experimental and control groups.

2. The difference in treatment for both groups.

3. The difference in treatment between the first and second trimester for the experimental group.

II. HYPOTHESES RELATED TO VERBAL AND NON-VERBAL PERFORMANCE

Hypothesis 9. There are no differences between the experimental and control groups' mean performance on the SRA-Verbal.

Findings: The results of the analysis of covariance used to test hypothesis 9 are reported in Table IX. There were no significant differences in the post treatment data between Group One and Group Two. Therefore, hypothesis 9, stating that there are no differences between the two groups in verbal performance on the SRA-Verbal, was retained.

Discussion: The F statistic for the analysis failed to reject the null hypothesis at .05 level of significance. This statistic seems to indicate no difference in the effect of the experimental program on Group Two with respect to verbal performance. Also, this data supports Munday's statement
concerning the ineffectiveness of special educational programs on the aptitude test scores of "high risk" students. The experimental group in this study received compensatory services of an academic nature for one trimester. The SRA-V was administered after the second trimester in which all compensatory services were discontinued with the exception of the special counselor.

**TABLE IX**

**DATA ON ANALYSIS OF COVARIANCE**

<table>
<thead>
<tr>
<th>SOURCES</th>
<th>SS X</th>
<th>SP</th>
<th>SS Y</th>
<th>SS YD</th>
<th>D F</th>
<th>MS YP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>982.3465</td>
<td>372.4342</td>
<td>141.1999</td>
<td>22.2060</td>
<td>1</td>
<td>22.2060</td>
</tr>
<tr>
<td>Within</td>
<td>21227.6535</td>
<td>11312.5658</td>
<td>14446.6711</td>
<td>8418.0186</td>
<td>28</td>
<td>300.6435</td>
</tr>
<tr>
<td>Total</td>
<td>22210.000</td>
<td>11685.0000</td>
<td>14587.8710</td>
<td>8440.2246</td>
<td>29</td>
<td></td>
</tr>
</tbody>
</table>

\[F = 0.739\]

**Hypothesis 10.** There are no differences between the experimental and control groups' mean performance on the SRA-Non-Verbal.

**Findings:** The results of the analysis of covariance used to test hypothesis 10 are reported in Table X. There were no significant differences in the post treatment data between Group One and Group Two. Therefore, hypothesis 10, stating that there are no differences between the two groups on non-verbal performance on the SRA-Non-Verbal, was retained.

**Discussion:** The F statistic failed to reject the null hypothesis at the .05 level of significance. No difference on non-verbal aptitude as measured by the SRA-Non-Verbal is indicated.
### Table X

**DATA ON ANALYSIS OF COVARIANCE**

**SRA - NON-VERBAL**

<table>
<thead>
<tr>
<th>SOURCES</th>
<th>SS X</th>
<th>SP</th>
<th>SS Y</th>
<th>SS YD</th>
<th>D F</th>
<th>MS YP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>1056.7755</td>
<td>67.2810</td>
<td>4.2835</td>
<td>59.2159</td>
<td>1</td>
<td>59.2159</td>
</tr>
<tr>
<td>Within</td>
<td>27617.9342</td>
<td>4903.1842</td>
<td>9384.6842</td>
<td>8514.1913</td>
<td>28</td>
<td>304.0783</td>
</tr>
<tr>
<td>Total</td>
<td>28674.7097</td>
<td>4835.9032</td>
<td>9388.9677</td>
<td>8573.4073</td>
<td>29</td>
<td></td>
</tr>
</tbody>
</table>

F = 0.1947

**Hypothesis 11.** There are no differences between the experimental and control groups' mean performance on the following values measured by the SRA-Survey of Interpersonal Values:

a. support  

b. conformity  

c. independence  

d. benevolence  

e. recognition  

f. leadership

**Findings:** The results of the analysis of covariance used to test hypothesis 11 are reported in Tables IV through X in the Appendix.

Support is defined as "being treated with understanding, receiving encouragement from other people, being treated with kindness and consideration."¹

There is no significant difference between the two groups on this interpersonal need.

Conformity is defined as "doing what is socially correct, following regulations, doing what is accepted and proper, being a conformist."\(^1\) There is no significant difference between the two groups on the mean scores for the value awarded conformity.

Independence is defined as "having the right to do whatever one wants to do, being free to make one's own decisions, being able to do things in one's own way."\(^2\) There is no significant difference between the two groups on the mean scores for the value placed on independence.

Benevolence is defined as "doing things for other people, sharing with others, helping the unfortunate, being generous."\(^3\) There is no significant difference between the two groups on the mean scores for the value placed on benevolence.

Recognition is defined as "being looked up to and admired, being considered important, attracting favorable notice; achieving recognition."\(^4\) There is no significant difference between the two groups on the mean scores for the value placed on recognition.

Leadership is defined as "being in charge of other people, having authority over others, being in a position of leadership and power."\(^5\) There is no significant difference between the two groups on the mean scores for the value placed on leadership.

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1 Ibid.
2 Ibid.
3 Ibid.
4 Ibid.
5 Ibid.
Discussion: Hypothesis 11, stating that there are no differences between the two groups on values measured by the SRA - Survey of Interpersonal Values, is accepted. The F statistic on the analysis of covariance failed to reject the null hypothesis at .05 level of significance.

SUMMARY OF HYPOTHESES NINE THROUGH ELEVEN

Table X in the Appendix summarizes the vital statistics on difference between the experimental group and the control group in verbal performance, non-verbal performance, and values. The most obvious conclusion about hypotheses 9 through 11 is that all four assumptions were not only confirmed but confirmed at a high level of significance. These statistical results support a second conclusion: The experimental program had no differential effects on the experimental subjects with regard to verbal and non-verbal aptitude (measured by the SRA-Verbal and SRA-Non-Verbal) and six interpersonal values (measured by the Survey of Interpersonal Values). It should be noted, however, that the conclusions just stated do not imply that there were no changes in individual students' achievement or test scores during the experimental period. It may mean that the changes were equal in magnitude. It should be noted that the grade point average was used for the analysis of covariance.

Also, any final conclusions based on the statistical analysis applied to hypotheses 9 through 11 should be made with cognizance of the following limitations in this study's experimental design:

a) The duration of all compensatory services directly manipulating academic aspects of this program was 16 weeks. This arrangement was good for testing the effect of the experimental program on GPA, but it was inadequate for assessing changes in
skills and values that have resulted from years of experience;

b) The number of students in the sample was too small to be considered a valid test for the strength of the statistical tests;

c) The non-equivalence between the two groups was equalized in post-treatment data by using the analysis of covariance.

SUMMARY OF CHAPTER IV

This chapter reported the results of the statistical analyses performed to test the hypotheses investigated in this study. Hypotheses were related to the effect of the experimental program in the following areas:

a) Grade Point Average
b) Verbal Aptitude
c) Non-Verbal Aptitude
d) Values

The organization of the chapter corresponded to the measures of significant change used to test the hypotheses. Part I presented the results of "t" tests for small independent samples and small dependent correlated samples on changes in GPA both between the two groups and within each group. Part II reported the results of the analysis of covariance on post-test data for verbal performance, non-verbal performance, and values.

In general, it appeared that the compensatory program inaugurated for this study significantly influenced the mean GPA for the experimental group. However, there were no significant changes between Groups One and Two with respect to verbal performance, non-verbal performance, and values.
CHAPTER V

SUMMARY AND IMPLICATIONS

In Chapter V, a brief summary of both the problem under investigation and the experimental design used to investigate the problem is presented. The discussion of findings includes both objective data based on analyses of tests and subjective observations gleaned from close personal experience with college students who characterize "high risk" status.

I. SUMMARY OF THE EXPERIMENT

It was the intent of this experiment to evaluate the effects of compensatory education on "high risk" college students.

Treatment: During the first trimester, a group of "high risk" students (experimental group) in the freshman class at Northeastern Illinois University received special treatment in terms of:

1. Academic support provided with class schedules reflecting their interests and aptitudes, reduced (maximum 12 hours) course load, and instructors who expressed an interest/concern in the education of "high risk" students;

2. Tutorial aids offered in a pre-school voluntary program;

3. Individualized attention during initial interviews and in planning of academic programs;

4. Emotional support from a Black counselor specifically hired to work with the "high risk" group.
During the second trimester, the program of academic support was eliminated from the compensatory services provided the experimental group. Financial aid and support from the counselor remained in the program.

A control group of incoming freshmen was blocked into a program of courses according to regular registration procedures for first trimester freshmen. No special services were introduced to this group; however, members of the group had access to regular student personnel services offered at Northeastern.

**Criteria and Corresponding Tests:**

**Grade Point Average.** The "t" test for small independent groups measured change between the experimental and the control groups' mean GPA for six trimesters. The "t" test for small dependent correlated groups measured change within both groups for the first and second trimesters.

**Verbal Aptitude, Non-Verbal Aptitude, and Values.** The analysis of covariance was used to test differences between the two groups in the preceding criteria. Tests used to measure these criteria were the SRA-Verbal, SRA-Non-Verbal, and SIV. Pre-tests were administered the month before the beginning of the first trimester, and post-tests were administered following the second trimester.

**Results:**

**Hypothesis 1**, there is no difference in the mean GPA's for the experimental group and control group at the end of the first trimester, is accepted.

**Hypothesis 2**, there is no difference in the mean GPA's for the experimental group and the control group at the end of the second trimester, is rejected.

**Hypothesis 3**, there is no difference in the mean GPA's achieved by the experimental group for the first and second trimesters, is rejected.
Hypothesis 4, there is no difference in the mean GPA's achieved by the control group for the first and second trimesters, is accepted.

Hypothesis 5, there is no difference in the mean GPA's for the experimental group and control group at the end of the third trimester, is rejected.

Hypothesis 6, there is no difference in the mean GPA's for the experimental group and control group at the end of the fourth trimester, is rejected.

Hypothesis 7, there is no difference in the mean GPA's for the experimental group and control group at the end of the fifth trimester, is rejected.

Hypothesis 8, there is no difference in the mean GPA's for the experimental group and control group at the end of the sixth trimester, is rejected.

Hypothesis 9, there are no differences between the experimental and control groups' mean performance on the SRA-Verbal, is accepted.

Hypothesis 10, there are no differences between the experimental and control groups' mean performance on the SRA-Non-Verbal, is accepted.

Hypothesis 11, there are no differences between the experimental and control groups' mean performance on the SIV, is accepted.

III. IMPLICATIONS OF THE RESULTS

The definition of "high risk" is reiterated to clarify the following discussion. "High risk" is a term used to specify a group of students challenging college admissions policy because their

Lack of money, low standardized test scores, erratic high school records and race/class/cultural characteristics, taken together, place them at a disadvantage in competition with the preponderant mass of students in the colleges they wish to enter.¹

¹Edgerton, op. cit., p. 1.
Effect of the Experimental Program on Grade Point Average: The significant change in the experimental group's GPA between the first and second trimester and its continued stabilization below the first trimester level seems to be directly attributable to the supportive academic services provided during the first trimester only. The mean GPA declined from 3.63 to 2.40. It should be stressed that courses taken during the first trimester were not remedial classes but were part of the regular curriculum. Nor was the "high risk" group segregated. There were never more than five members of the group in a class. Instruction was geared to the whole class and not a particular level of aptitude. The instructors, however, were reputed to be among the most creative and skilled members of the faculty. Another important aspect of the academic support was the balance of courses within each program. Evidence from the literature on economically and educationally deprived, strongly indicates that skills in reading, language arts, and abstract thought often are under-developed in comparison to students from higher socio-economic backgrounds (of the same age/grade level). Based on evidence from research, the first trimester programs contained no more than one course that stressed reading (survey-type courses in the social sciences), an elementary math rather than science course, and two 'doing' courses such as art, speech, or an experimentally taught psychology course.

As Table IV indicates, the deletion of the academic supports in the experimental program had dramatic results. A typical program for members of this group during the second trimester included a survey course in physical science,

a basic course in philosophy emphasizing syllogistic logic, a course in the nature and structure of language and of modern American English in particular, a course that combines literature and writing and a survey course in anthropological/sociological perspectives. Not only did the experimental group members take a program of subjects in which skill in reading and abstract thought processes were imperative; they also had last choice in instructors because they registered according to number of hours completed at Northeastern. While the first trimester program limited class credit hours to 12, many students in the group registered for 15 - 17 hours the ensuing trimesters. This number of hours is considered an average full-time load of courses.

On the other hand, the control group had a .97 correlation between first and second trimester grades. It is tempting to conclude that the high positive correlation between the first and second trimester mean GPA for the control group would have been duplicated in the experimental group had it not received compensatory academic services the first trimester. The assumption could be made that the experimental group would have achieved approximately a 2.40 mean GPA each trimester. Because of the limitations in design (discussed in Chapter III), the two groups are not comparable in some important variables: Therefore, any assumptions that equate the two groups are tentative. Further research on compensatory education should, of course, refine the sampling selection and control the variables for the experimental and control groups.

Effect of the Experimental Program on Verbal and Non-Verbal Aptitude and Values: According to the analysis of covariance, the experimental program had no influence on verbal and non-verbal aptitude nor values. Furthermore, these
conclusions are consistent with most of the research on compensatory educa-
tion for disadvantaged youth. In a speech sponsored by the Erikson Institute
for Early Education, Spitz summarized the research on cognitive development
of children from low socio-economic backgrounds and related the meaning of
these studies to compensatory education.¹ He used the term "learning to
learn" to define the critical element in the cognitive process. "Learning
to learn" has nothing to do with teaching reading, writing, or arithmetic
at an early age. It is a much more basic type of learning that occurs in
the first few years of a child's life and is a response to a mother-child
relationship that motivates the child to find pleasure in learning. It re-
reflects the satisfaction that comes from approval, the willingness to postpone
immediate gratification to gain favorable responses from adults, the tendency
to regard adults as a reliable source of information, and finally the devel-
opment of a self-concept that mirrors the expectations of others. Spitz
said the kind of relationship just described is more often absent in lower
socio-economic homes than higher socio-economic homes. Such elements as size
of family, concern of parents for the basic necessities of life, low level of
educational development of the parents, and frequent absence of a male parent
contribute to a lack of interaction between children and adults that reduces
the chance for the kinds of stimulation that make "learning to learn" possible.

The major research on compensatory education has been done in pre-school
age children in the Head Start Program. A report on Head Start in 1966 claim-
ed that the average increment for I. Q. was eight to ten points and the average

¹Ibid.
improvement in intellectual performance was 14 months.\textsuperscript{1} However, Head Start has been severely criticized for the inadequacy of their studies.\textsuperscript{2} Spitz, in a recent study on Head Start children who have now been in the New York public School System for two years, reported that this group of children are below the mean in aptitude test scores in comparison with the rest of the children in their classes.\textsuperscript{3}

Research unrelated to Head Start shows conclusively that pre-school compensatory education is of very limited benefit. Although some have shown spectacular gains in aptitude test scores due to experimental programs, these gains were quick to erode without consistent reinforcement. If there is a lapse between the pre-school program and first grade, gains are minimal.\textsuperscript{4}

Even though the compensatory program reported in this study was of short duration, its lack of effect on aptitude test scores and values support most of the findings related to compensatory education for the disadvantaged. If the implications of research on pre-schoolers suggest continuous reinforcement to maintain any changes, the implications for a compensatory program at the college level suggest an intensive plan of attack to help the "high risk" student develop skills that will enable him to succeed in college. These programs should include all of the services discussed in the treatment


\textsuperscript{2}F. M. Heckinger, "Head Start to Where?" Saturday Review of Literature, December 18, 1965.

\textsuperscript{3}Spitz, op. cit.

of the experimental group plus compensatory tutorial classes in reading, language arts, and mathematics. Students entering these programs should understand that tutorial courses in the latter areas are a part of the program. Individual tutoring should be provided when necessary. Furthermore, all of these services should continue for at least two years, after which time each student should be evaluated and continue either with the full supportive program or parts of the program, depending on the results of the evaluation.

To enroll "high risk" students without the kinds of compensatory services suggested above only reinforces the defeat and frustration these students have experienced throughout their years of formal education. Colleges and universities that accept "high risk" students without the requisite program of compensatory education might question their motives. If an altruistic regard for human beings shapes the institution's policy, the next step is a realistic approach to the problems faced by "high risk" students. Bettelheim's admonition that "love is not enough" might be an appropriate guide for the establishment of compensatory programs.¹

III. PHILOSOPHICAL JUSTIFICATION OF "HIGH RISK" PROGRAMS FOR COLLEGE STUDENTS

The problems embraced by the study seem to have philosophical as well as practical implications. The practical implications were discussed previously; the philosophical implications were alluded to in the introductory chapter: The malaise of a society --- the historical process of evolution/revolution ---

the psychological guilt of white liberals --- the utilization of education as a balancing peg in the struggle for social and economic equality. All of these problems receive frequent front page and editorial comment. Another philosophical problem has great relevancy to an "open door" policy for colleges and universities. This is the problem presented by the condition of Being Human. Many sociologists, educators, economists, political scientists, and historians seem to resist the human condition. Most often they leave such commentary to playwrights, novelists, psychologists of certain theoretical schools, and philosophers. Because the latter group deals with abstractions and fantasies, it is difficult to present factual evidence in a scholarly manner about the condition of Being Human and what this means to the concept of extending higher education to all.

Eric Fromm states the dilemma of Being Human in *Escape From Freedom.* He writes that the paradoxical quality of existence is maddening: To be both a part of and a part from nature drives one to all sorts of defensive maneuvers. How does one cope with the knowledge that he be a mortal being within an ongoing design? Freud answered this question with *The Future of an Illusion.* Twentieth century novelists, philosophers, and playwrights have elaborated on man's need to delude himself as a compromise for his morality. Hemingway's "Old Man" fights the inevitable with patience, skill, and determination. Tennessee Williams' Blanche preserves her sanity with illusions about her


refinement and honor.\textsuperscript{1} Arthur Miller's \textit{Death of a Salesman} is an example of a whole family deluding themselves to preserve a modicum of sanity.\textsuperscript{2} All of Eugene O'Neill's plays recognize that life is intolerable without illusion. And finally, the tour de force is represented by the Theatre of the Absurd. The grandiose illusions of man are satirized: Man in a garbage can is no more than lonely and foul.\textsuperscript{3}

The popular philosophy of the twentieth century, existentialism, provides a golden rule for its adherent: "Man is nothing else but what he makes of himself."\textsuperscript{4} Certainly this principle gives man control over his life. There is, however, a paradox in modern existentialism. On one hand, it glorifies man as an autonomous creature; and, on the other hand, it creates the Myth of Sisyphus, the story of a man whose destiny is determined by certain passions.\textsuperscript{5}

Just as the atheistic brand of existentialism attempts to give man a purposeful role amid absurd conditions, the theistic branch of this philosophy offers a solution to the dilemma. The popularity of humanism in theology and in psychology owes much to Martin Buber. In \textit{I and Thou},\textsuperscript{6} he wrote that the

\begin{enumerate}
\item T. Williams, \textit{A Streetcar Named Desire} (New York: New Directions, 1947).
\end{enumerate}
search for meaning can be attained through a special kind of interpersonal relationship. According to Buber, when a relationship is an end in itself, one need not be concerned with the ultimate.

The preceding discussion was an attempt to show that illusion is a commonly used copying mechanism; illusions about our purpose in a mechanically perfect but humanistically mystifying order. Is illusion good or bad? No moral judgements have been made. It seems to be a necessity, or certainly the best answer man has devised to help him relax with his fate. Therefore, the right of an individual to pursue the fulfillment of his particular illusion in a socially acceptable way should be offered to all. If an individual perceives higher education as the door leading to a purposeful life, the very fact that he, as a human being, is striving to find worth and meaning demands that this opportunity be available to him.

SUGGESTIONS FOR FURTHER RESEARCH

The implications of this exploratory study suggest a long term approach to the problems inherent to compensatory education for "high risk" college students. It would be interesting to establish a supportive program, similar to the one inaugurated for this study, for a minimum of two years. The results of this study, a review of the literature relevant to this study, and personal experience with the students described in the study indicate the necessity for compulsory classes in reading, language arts, and mathematics. The inclusion of these classes as a regular part of compensatory services would be based on aptitude/achievement test scores in the above areas.

The moral dilemma of setting up a control group of "high risk" students who would be denied compensatory services might be salved by designing an intra-
institutional research. For example, Northeastern Illinois University already is a member of an organization dedicated to research and experimentation in colleges and universities. Participating schools might emphasize a specific facet of supportive services. Differences in academic achievement, aptitude test scores, and attitudes might be used to evaluate the worth of the various services.

Also, it would be interesting to conduct the same program at two or more institutions to determine the influence of supportive personnel and the general school environment on the success of the program.

An evaluation of group counseling methods is another area of research. A design utilizing all of the suggested supportive services would divide "high risk" students into two groups for counseling. One group would participate in a highly structured, achievement motivation type of program, and the second group would form a loosely structured sensitivity group. Emphasis in the first group would be the setting of goals and their attainment, while the latter group would concentrate on the development of self understanding through interaction with group members.
## APPENDIX

### TABLE I

RESULTS OF "T" TESTS ON DIFFERENCES BETWEEN THE EXPERIMENTAL GROUP AND THE CONTROL GROUP ON ACT COMPOSITE SCORES

<table>
<thead>
<tr>
<th>Experimental Group</th>
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</tr>
</thead>
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<td>N = 25</td>
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<td>M = 13.5</td>
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<table>
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<th></th>
<th></th>
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</thead>
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</tr>
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# APPENDIX

## TABLE II

EXPERIMENTAL GROUP GRADE POINT AVERAGES
FOR THE FIRST AND SECOND TRIMESTERS

<table>
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<th>Second Trimester</th>
</tr>
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**APPENDIX**

**TABLE III**

CONTROL GROUP GRADE POINT AVERAGES FOR THE FIRST AND SECOND TRIMESTERS

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## APPENDIX

### TABLE IV

**DATA ON ANALYSIS OF COVARIANCE**  
**SRA - SURVEY OF INTERPERSONAL VALUES - SUPPORT**

<table>
<thead>
<tr>
<th>SOURCES</th>
<th>SS X</th>
<th>SP</th>
<th>SS Y</th>
<th>SS YP</th>
<th>D F</th>
<th>MS YP</th>
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</thead>
<tbody>
<tr>
<td>Treatment</td>
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<td>0.1993</td>
</tr>
<tr>
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<td>73.7973</td>
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<td>417.0000</td>
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F = 0.0144

### TABLE V

**DATA ON ANALYSIS OF COVARIANCE**  
**SRA - SURVEY OF INTERPERSONAL VALUES - CONFORMITY**

<table>
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<tr>
<th>SOURCES</th>
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<th>SS Y</th>
<th>SS YP</th>
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<th>MS YP</th>
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<tbody>
<tr>
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F = 0.0039
### APPENDIX

#### TABLE VI
**DATA ON ANALYSIS OF COVARIANCE**  
SRA - SURVEY OF INTERPERSONAL VALUES - INDEPENDENCE

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\[ F = 0.0868 \]

#### TABLE VII
**DATA ON ANALYSIS OF COVARIANCE**  
SRA - SURVEY OF INTERPERSONAL VALUES - BENEVOLENCE

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\[ F = 0.2653 \]
## APPENDIX

### TABLE VIII
**DATA ON ANALYSIS OF COVARIANCE**
*SRA - SURVEY OF INTERPERSONAL VALUES - RECOGNITION*

<table>
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<th>SS Y</th>
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$F = 0.4850$

### TABLE IX
**DATA ON ANALYSIS OF COVARIANCE**
*SRA - SURVEY OF INTERPERSONAL VALUES - LEADERSHIP*

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<th>SOURCES</th>
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<th>SS Y</th>
<th>SS YP</th>
<th>D F</th>
<th>MS YP</th>
</tr>
</thead>
<tbody>
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<td>23.0859</td>
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<td>259.4194</td>
<td>778.8387</td>
<td>674.1283</td>
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</tbody>
</table>

$F = 1.2009$
### TABLE X

**SUMMARY OF ANALYSIS OF COVARIANCE**

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<th>VARIABLE</th>
<th>PRE-TEST MEANS</th>
<th>ADJUSTED POST-TEST MEANS*</th>
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</thead>
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<tr>
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<td>Experimental</td>
<td>Control</td>
<td></td>
</tr>
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<td>SIV - S</td>
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<td>16.4378</td>
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<tr>
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<td>9.2856</td>
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<td>SIV - I</td>
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<td>15.4211</td>
<td>18.9399</td>
</tr>
<tr>
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* "Adjusted" --- after accounting for the initial level of pre-test score
### TABLE XI
EXPERIMENTAL GROUP GRADE POINT AVERAGES
FOR TRIMESTERS THREE THROUGH SIX

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<tr>
<th>Subjects</th>
<th>3rd Trimester</th>
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<th>6th Trimester</th>
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APPENDIX

TABLE XII

CONTROL GROUP GRADE POINT AVERAGES
FOR TRIMESTERS THREE THROUGH SIX

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Bryan, J. Personal Communication.


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Osborne, P. T. "Racial Differences in Mental Growth and School Achievement: A Longitudinal Study," Psychological Reports, 7, 1960.


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APPROVAL SHEET

The dissertation submitted by Eric B. Moch has been read and approved by members of the School of Education.

The final copies have been examined by the director of the dissertation, and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Education.

[Signature]

Date: Jan 16, 1975