

A COMPARATIVE STUDY OF ACADEMIC ACHIEVEMENT AND  
ENVIRONMENTAL PRESS OF STUDENTS IN AN  
INNOVATIVE AND A TRADITIONAL  
PROGRAM AT A PREDOMINANTLY  
BLACK COLLEGE

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## TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION . . . . .	1
Statement of the Problem . . . . .	7
Definition of Terms . . . . .	8
Definition of Terms as Variables . . . . .	10
Purpose of the Study . . . . .	12
Research Questions and Hypotheses . . . . .	13
Delimitations . . . . .	16
Limitations of the Study . . . . .	17
Assumptions . . . . .	17
Organization of the Study . . . . .	18
II. REVIEW OF THE LITERATURE . . . . .	19
Introduction . . . . .	19
Background and Development . . . . .	19
Related Research on Environment . . . . .	21
Studies Related to Attitudes and Values . . . . .	25
Studies Related to Black Colleges and Students . . . . .	30
Grades as Related to Academic Achievement . . . . .	33
III. METHODOLOGY AND DESIGN . . . . .	36
Introduction . . . . .	36
Five College Curriculum Innovative Thrust . . . . .	36
FCCIT vs. Traditional Program . . . . .	37
Special Services . . . . .	41
Population of the Study . . . . .	42
Testing Instrument . . . . .	43
Statistical Procedure . . . . .	44
Summary . . . . .	44
IV. ANALYSIS OF DATA AND CONCLUSION . . . . .	46
Presentation . . . . .	46
Academic Grade Point Averages . . . . .	46
Environmental Press Perceived by Experimental and Control Groups . . . . .	49

Chapter	Page
V. SUMMARY, CONCLUSION AND RECOMMENDATION . . . . .	61
Introduction . . . . .	61
Summary of the Study . . . . .	61
Findings of the Study . . . . .	62
Conclusions . . . . .	63
Recommendations for Program Development . . . . .	66
Recommendations for Further Research . . . . .	67
Concluding Remarks . . . . .	69
SELECTED BIBLIOGRAPHY . . . . .	70
APPENDIX A, COLLEGE CHARACTERISTICS INDEX . . . . .	77
APPENDIX B, PRESS SCALE DEFINITIONS (CCI) . . . . .	85
APPENDIX C, ENVIRONMENTAL FACTORS AND SCALES (CCI) . . . . .	88
APPENDIX D, COLLEGE CHARACTERISTICS INDEX NORMS . . . . .	91
APPENDIX E, INNOVATIVE COURSE OUTLINE . . . . .	94

LIST OF TABLES

Table	Page
I. A Statistical Comparison of the Academic Achievement of the 1970-71 Experimental and Control Groups in Four Subject Areas . . . . .	47
II. A Statistical Comparison of the Environmental Press (Aspiration Level) of the Experimental and Control Groups . . . . .	50
III. A Statistical Comparison of the Environmental Press (Intellectual Climate) of the Experimental and Control Groups . . . . .	51
IV. A Statistical Comparison of the Environmental Press (Student Dignity) of the Experimental and Control Groups . . . . .	52
V. A Statistical Comparison of the Environmental Press (Academic Climate) of the Experimental and Control Groups . . . . .	52
VI. A Statistical Comparison of the Environmental Press (Academic Achievement) of the Experimental and Control Groups . . . . .	53
VII. A Statistical Comparison of the Environmental Press (Self-Expression) of the Experimental and Control Groups . . . . .	54
VIII. A Statistical Comparison of the Environmental Press (Group Life) of the Experimental and Control Groups . . . . .	55
IX. A Statistical Comparison of the Environmental Press (Academic Organization) of the Experimental and Control Groups . . . . .	55
X. A Statistical Comparison of the Environmental Press (Social Form) of the Experimental and Control Groups . . . . .	56
XI. A Statistical Comparison of the Environmental Press (Play-Work) of the Experimental and Control Groups . . . . .	57

Table	Page
XII. A Statistical Comparison of the Environmental Press (Vocational Climate) of the Experimental and Control Groups . . . . .	57
XIII. A Statistical Comparison of the Overall Mean Grade Point Averages of the 1970-71 Freshmen Groups . . . . .	58
XIV. A Statistical Comparison of the Overall Mean Grade Point Averages of the 1974-75 Freshmen Groups . . . . .	59
XV. A Statistical Comparison of the Overall Mean Grade Point Averages of the 1974-75 Senior Groups (1970-71 Freshmen) . . . . .	60



## CHAPTER I

### INTRODUCTION

In the 1960's, a critical state of unrest existed in society while most sharply mirrored in the young people who were gathered in increasing numbers on college and university campuses (23). This unrest was seen, for the most part, in the new youth culture's expressions of disdain, challenge, and open rebellion directed toward the disruption and reform of established goals and objectives of our society. The cry of the new youth culture was "relevancy" to the problems and issues of contemporary society. Specifically demonstrative of the character of the new youth have been two characteristics of American society, restlessness and rootlessness. The restlessness and rootlessness of American society have caused colleges and universities to re-examine their offerings and efforts.

Many colleges and universities, for their survival and health, are beginning to seek or provide funds for curriculum development to meet the needs of their constituents. Course descriptions in college catalogs are being revised to include not only new course offerings for contemporary relevance, but also new ways (primarily pedagogical) to re-emphasize intellectual relevance (a matter of approach) (58).

An educational premise has been that whenever goals and objectives have been judged desirable for the society, they have tended to be accepted as valid concerns of the schools (40). Traditionally, the

educational system was developed on the premise that a standard curriculum would meet the needs of its student population. At the same time, success in school was measured by a letter or numerical rating.

It is understandable why this type of system cannot meet the unique needs of all individuals. The deprived backgrounds of many representatives of the nation's sub-cultures make it impossible for them to successfully compete academically. Results of such unfavorable experiences have caused many to have low self-concepts, and often to develop a degree of social hostility toward the sub-society and hostility towards others stemming primarily from their frustrations (83). For example, the Black American youth finds himself caught up in a web that has been spun by society. This web, which canvasses the entire culture of Black people, has affected the student's behavior patterns. His self-concept is a by-product of experiences, and he finds it difficult in a traditional system to have satisfactory everyday experiences (26). Research substantiates the premise that self-concept is definitely a positive factor to be considered in attaining academic or social success (Trowbridge, 1965; Soares and Soares, 1967; Drew, 1969; Thornton, 1967; Zirkel, 1970; Zirkel and Moses, 1971; and Greenberg, 1962).

Spache (77) revealed that students handicapped by poverty do not possess adequate stimulation to want to learn due to low and inconsistent self-concepts.

Many parents of Black students are involved in low semi-skilled to unskilled occupations. The average Black family income is 37% below the national family income; parent's educational background is 31% below the national average. As a result of family background, long-range educational plans for these students are not assured, as opposed to the

advantaged student whose background has been educationally stable (83).

What can be done to raise the achievement level of such students? In addition, what is being done to encourage their success in college? Attempts to answer the questions are becoming more evident. A number of programs under federal, state, and local support are being implemented between the high school and college levels. The objectives include generally the search for talented disadvantaged students, and the provision of information, training, or aid to enhance the student's potential for success in college. Major pre-college preparatory programs are currently operating as part of Project UPWARD BOUND, for example. The Office of Economic Opportunity notes that some 26,000 disadvantaged students have been provided with some form of aid through this program. Talent Search (1968), supported by the U. S. Office of Education, provides student counseling services at the city and neighborhood levels. Examples of city-wide efforts within the Talent Search system include COPE (Boston), OPEN (Washington, D.C.), and HOPE. Evaluation of some of these efforts is given in Gordon (28) and Nelson (63).

At the college level, a variety of special programs for disadvantaged students is evident. Early studies of college programs for disadvantaged students are described by Gordon (28) and by Wilkerson (90). Information on programs, practices, special assistance measures, and counseling are provided for the period 1964-66. The Southern Educational Report, in conjunction with the Southern Education Foundation of Atlanta, has conducted recent surveys in a large sample of institutions. The objectives have been assessment of the nature and extent of special college programs for the high-risk (bright) disadvantaged student. A major question at this point is, what avenues are being

explored for the average high-risk disadvantaged student? The majority of these students usually attend predominantly black institutions. What special programs have been initiated to assure these students of possible college success? In an attempt to answer the questions partially, one of the major goals or functions of the predominantly black institution is to provide education opportunities for all students regardless of their academic abilities (53).

As discussed earlier, many special programs have been initiated by organizations and foundations. One organization of particular importance is the Institute for Services to Education (ISE).

The Institute for Services to Education (ISE), a nonprofit organization, was incorporated in 1965 and received a basic grant from the Carnegie Corporation of New York. The organization was founded on the principle that education today requires a fresh examination of "what is worth teaching and how to teach it?" With grants from government agencies and private foundations, ISE undertook a variety of educational tasks working cooperatively with other institutions to become a catalyst for change.

ISE developed a curriculum for six Pre-College Centers, which became the models for the Office of Economic Opportunity's UPWARD BOUND program. In 1967, ISE went on to develop and coordinate the Thirteen College Consortium Program (TCCP). The consortium consisted of thirteen predominantly black colleges involved in an educational experiment. The TCCP developed new curricular materials for the entire freshman year of college in the areas of English, mathematics, social science, and natural science, in addition to two sophomore year courses--humanities and philosophy.

The program was designed to reduce the attrition rate of entering freshmen through the use of new curricular materials, new teaching styles, and new faculty arrangements for instruction. Furthermore, the program sought to alter the educational pattern of the institutions involved by changing blocks of courses rather than by developing single courses. The program was viewed not only as a curriculum program with a consistent set of academic goals for the separate courses, but also as a vehicle to produce new and pertinent educational changes within the consortium institutions (40).

In 1970, five more colleges joined to form a separate consortium. This consortium is known as the "Five College Curriculum Innovative Thrust" program (FCCIT). In 1971, eight more colleges joined the curriculum development effort as another consortium, the "Eight College Curriculum Program" (ECCP). Seven additional colleges created still another consortium in 1972, entitled the "Consortium for Curricular Change Program" (CCCP). The number of colleges participating in programs with ISE has grown from the original thirteen in 1967, to thirty-five in 1974.

In 1970, Langston University, together with other predominantly Black institutions of higher learning, sought avenues by which to create a better and more relevant academic climate for its students. In a five-college consortium with Elizabeth City State University, Saint Augustine's College, Southern University at Shreveport, and Texas Southern University, Langston University participated in the ISE's Five-College Curriculum Innovative Thrust (FCCIT).

The FCCIT program sought to provide students with academic and social styles as well as multidisciplinary curriculum suited to meet

individual needs. The program was designed to be comprehensive and viable in structure and interdisciplinary in application through which open-ended procedures are used. It also represents an effort to develop teaching strategies and curriculum materials to motivate students to succeed.

The educational development efforts of the Five College Curriculum Innovative Thrust at Langston University have been aimed at (1) developing course content in English, mathematics, social science, and natural science that would be more topical and germane to the students' experience than those materials traditionally in use; (2) defining current problems in the teaching of these courses, along with the ramifications of and possible solution to those problems; (3) deriving a philosophy of education that would stimulate teachers enough to think of the need for altering their attitudes toward their role in the classroom and their student's academic problems and basic needs; and (4) developing methodologies and techniques that would stimulate and improve student's learning processes, and motivate students to assume an active role in their own learning (53).

The materials and techniques that had been developed was based upon three assumptions. The first, and probably the most important assumption being that students can be more effectively motivated to learn and to become involved in the learning process when they are placed in a student-centered academic environment in which pedagogy and curriculum materials combine to ignite their intellectual curiosity, encourage a free exchange and expression of their own life styles, ideas, reflections, private insights, and experiences; and to build more positive self-images. The second assumption was that optimum learning conditions

were more apt to occur if teachers assumed roles as student guides and curriculum innovators, rather than when they assumed the stance of classroom arbiters and, presumably, sources of all worthwhile knowledge. The final assumption was teachers, when freed from the structure of syllabi and rigid course content, become more creative and responsive of students' needs and, thereby, make their teaching more pertinent to the students and more enjoyable for themselves (40).

The objectives herein stated are all close to achievement. However, some are of an ongoing nature--developing course content in each of the four areas--defining current problems in the teaching of these areas and possible solutions to these problems. Total implementation of a philosophy of education that would stimulate teachers enough to think of the need for altering their attitude toward their role in the classroom and their student's academic problems and basic needs has not been achieved (53).

The goal of total implementation of the program has not been reached. However, the program has established a supportive administrative structure to work toward this end (43).

Since the Five-College Consortium has recognized the need to initiate experimental curricula in relation to their traditional programs, what has occurred over a period of four years? What have been the effects of such an innovative curricula upon academic performance and the influence of environmental press of the students in question?

#### Statement of the Problem

This study was designed to determine to what extent students from disadvantaged backgrounds would benefit by participating in an innova-

tive curriculum program, as compared with their peers who were assigned to the traditional college curriculum program. The study was conducted at Langston University, a four-year liberal arts college, located in Langston, Oklahoma.

As shown from composite scores and high school grade point averages, many students entered Langston University inadequately prepared for college work. To compensate for this, the University cooperated in an innovative curriculum program in an effort to design and adopt programs that would perhaps increase the level of competence of freshmen, after they were enrolled. The university was hopeful that this type of program would bring its students to a level where they could successfully compete intellectually, socially, and culturally throughout their college career.

To determine if the program has been successful during its four years of operation, a study was needed to discover the differences, if any, between students enrolled in the innovative program and those enrolled in the traditional program. If significant differences were found between the two groups of students, this information would be invaluable for colleges and universities seeking to update and improve their programs. If positive, the information would also encourage students, who otherwise would not make application to college for fear of failure, to attend those colleges and universities engaged in a program similar to the innovative curriculum program.

#### Definition of Terms

American College Test (ACT) - refers to the battery of tests that the American College Testing Program uses in its educational assessment program.



College Characteristics Index (CCI) - refers to an individual's perception of the press in an environment related to the student's pattern of personality needs (self-concept).

Five College Curriculum Innovative Thrust (FCCIT) Program Students - refers to program students enrolled in the innovative curriculum in the areas of English, mathematics, social science, and natural science.

Traditional Program Students - refers to regular students enrolled in the long-established curriculum in the areas of English, mathematics, social science, and natural science.

Experimental Group - refers to students enrolled in the Five College Curriculum Innovative Thrust program (FCCIT).

Control Group - refers to students enrolled in a traditional program.

Academic Achievement (Grades) - refers to the grade point average of students based on a four-point scale (A=4.0, B=3.0, C=2.0, D=1.0, and F=0.0).

Freshman Grade Point Average (GPA) - refers to student's grade point average during the freshman year.

Senior Grade Point Average (GPA) - refers to student's grade point average during the senior year.

Environmental Press - refers to student's evaluation and attitudes towards their characteristics and environment. The evaluation is based upon a view each subject has of themselves and the environment which surrounds them. In this study, Environmental Press is operationally defined in terms of the eleven factor scores on the College Characteristics Index developed by George Stern and Robert Pace. The eleven factors are:

1. Aspiration Level

2. Intellectual Climate
3. Student Dignity
4. Academic Climate
5. Academic Achievement
6. Self-Expression
7. Group Life
8. Academic Organization
9. Social Form
10. Play-Work
11. Vocational Climate

Institute for Services to Education (ISE) - refers to the organization which coordinated the efforts of the Five College Curriculum Innovative Thrust program.

#### Definition of Terms as Variables

The factors of the College Characteristics Index by Stern and Pace (67), are as follows:

1. Aspiration Level - A high score on this factor indicates that the college encourages students to set high standards for themselves in a variety of ways. These include opportunities for students to participate in decision-making processes involving the administration of the school and the administration's receptivity to change and innovation, thus implying that a student's efforts to make some impact on his environment have some probability of being successful. A high level of aspiration is also encouraged by introducing students to individuals and ideas likely to serve as models for intellectual and professional achievement.

2. Intellectual Climate - The various items contributing to this factor reflect the qualities of staff and plant specifically devoted to scholarly activities in the humanities, arts, and sciences.
3. Student Dignity - This factor is associated with institutional attempts to preserve student freedom and maximize personal responsibility. Schools with high scores on this factor tend to regulate student conduct by means other than legislative codes or administrative fiat. There is a minimum of coercion, and students are generally treated with the same level of respect accorded any mature adult.
4. Academic Achievement - Schools high in this factor set high standards of achievement for their students. Course work, examinations, honors, and similar devices are employed for this purpose.
5. Academic Climate - This factor stresses academic excellence in staff and facilities in the conventional areas of the natural sciences and the humanities.
6. Self-Expression - This factor is concerned with opportunities offered to the student for the development of leadership potential and self assurance. Among the activities serving this purpose are public discussions and debates, projects, student drama, musical activities, and other forms of participation in highly visible activities.
7. Group Life - This factor is concerned with various forms of mutually supportive group activities among the student body. These activities are of a warm, friendly character, more or

less typifying adolescent togetherness, but the items also reflect a more serious side to this culture as represented in activities devoted to the welfare of both fellow students and also less fortunate members of the community.

8. Academic Organization - The various components of this factor may be regarded as the environmental counterparts of the needs for orderliness and submissiveness in the individual. High scores on this factor are achieved by institutions which stress a high degree of organization and structure in the academic environment.
9. Social Form - Schools characterized by this factor offer opportunities for the development of social skills of a formal nature and in some respects suggest the finishing school counterpart of the vocational climate.
10. Play-Work - Schools high in this factor offer opportunities for participation in a form of collegiate life reminiscent of the popular culture of the 1920's. These are the institutions sometimes referred to as the fountains of knowledge where students gather to drink.
11. Vocational Climate - The items of this factor emphasize practical, applied activities, the rejection of aesthetic experience, and a high level of orderliness and conformity in the student's relations to the faculty, his peers, and his studies. (See Appendix C.)

#### Purpose of the Study

The purpose of this study was to determine possible benefits

derived through participation in the Five College Curriculum Innovative Thrust program offered at Langston University. The study has considered two basic questions: Research Question One - Do students in the experimental program achieve better grades than students in the traditional program in the areas of English, mathematics, social science, and natural science? (2) Do the experiences in a college environment, as measured by the College Characteristics Index (CCI), influence the perceptions of the experimental and control groups? The answers to these questions should illuminate the value of the program offered.

#### Research Questions and Hypotheses

Research Question One: Do participants in the experimental program achieve better academic grades than nonparticipants in the areas of: English, mathematics, social science, and natural science?

##### Hypothesis Ia

There will be no statistically significant difference in the academic achievement of the experimental group and that of the control group with respect to grades received in English.

##### Hypothesis Ib

There will be no statistically significant difference in the academic achievement of the experimental group and that of the control group with respect to grades received in mathematics.

##### Hypothesis Ic

There will be no statistically significant difference in the academic achievement of the experimental group and that of the control

group with respect to grades received in social science.

#### Hypothesis Id

There will be no statistically significant difference in the academic achievement of the experimental group and that of the control group with respect to grades received in natural science.

Research Question Two: Do the experiences in a college environment, as measured by the College Characteristics Index (CCI), influence the perceptions of the experimental and control groups? This question led to the development and analyzation of the following hypotheses.

#### Hypothesis IIa

There will be no statistically significant difference between the mean CCI scores on Factor 1, Aspiration Level, of the experimental group and that of the control group.

#### Hypothesis IIb

There will be no statistically significant difference between the mean CCI scores on Factor 2, Intellectual Climate, of the experimental group and that of the control group.

#### Hypothesis IIc

There will be no statistically significant difference between the mean CCI scores on Factor 3, Student Dignity, of the experimental group and that of the control group.

Hypothesis II d

There will be no statistically significant difference between the mean CCI scores on Factor 4, Academic Climate, of the experimental group and that of the control group.

Hypothesis II e

There will be no statistically significant difference between the mean CCI scores on Factor 5, Academic Achievement, of the experimental group and that of the control group.

Hypothesis II f

There will be no statistically significant difference between the mean CCI scores on Factor 6, Self-Expression, of the experimental group and that of the control group.

Hypothesis II g

There will be no statistically significant difference between the mean CCI scores on Factor 7, Group Life, of the experimental group and that of the control group.

Hypothesis II h

There will be no statistically significant difference between the mean CCI scores on Factor 8, Academic Organization, of the experimental group and that of the control group.

Hypothesis II i

There will be no statistically significant difference between the mean CCI scores on Factor 9, Social Form, of the experimental group and

that of the control group.

#### Hypothesis IIj

There will be no statistically significant difference between the mean CCI scores on Factor 10, Play-Work, of the experimental group and that of the control group.

#### Hypothesis IIk

There will be no statistically significant difference between the mean CCI scores on Factor 11, Vocational Climate, of the experimental group and that of the control group.

#### Delimitations

This study includes an analysis of environmental press scores and academic grades of two groups of students. The subjects were 87 Black students (43-experimental and 44-control), who were residual from the original population, after four years of college work. However, the original population consisted of freshmen students who entered the university the fall semester of 1970-71. These students were randomly selected to participate in the Five College Curriculum Innovative Thrust and traditional programs. One group of students was assigned to participate in the experimental program, while the other group was assigned to the regular college program offered.

This study was concerned with the descriptive nature of the students in both groups in relationship to academic achievement and the perceptions of the environmental press after four years.



### Limitations of the Study

A limitation of this study is one common to all studies of attitudes; that is, the validity of the measuring instrument. In addition, the sample studied may not be representative of any group other than the population from which it was taken. Therefore, generalization of these findings to other groups may not be justified.

The eleven factors included in this survey represent, at best, a partial picture of the important characteristics of the college environment. In relation to grades, this study employed the predicted scores, as reported by the American College Test (ACT), to establish the equality of the groups under investigation. These scores were not, however, under investigation as part of the study.

### Assumptions

1. The American College Test is a reliable and valid measurement of the scholastic ability of the individual tested.
2. The College Characteristics Index is a reliable and valid instrument which measures a student's perceptions of his college environment.
3. Grades assigned by instructors were a comprehensive assessment of student's academic achievement in the subject for which they were assigned a grade.
4. The group of students utilized in the study was representative of typical students enrolled at Langston University and can be used in the evaluation of the problem.

## Organization of the Study

Chapter I is an introduction to the problem to be studied. It presents the statement of the problem, significance of the study, hypotheses, definition of terms, delimitations, and limitations of the study.

Chapter II presents a review of the related literature and its applicability to the study.

Chapter III describes the population of the study, testing instruments utilized, methodology and design of the study, and statistical methods used in evaluating the data.

Chapter IV presents the analysis of the data, and Chapter V consists of a summary, the conclusions, and recommendations concerning the need for future studies in this area.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### Introduction

The use of social and psychological factors in studying college environments is becoming more prevalent. The attention of educators has shifted gradually from statistical appraisals to planning and personnel, as researchers increase their efforts to identify those sociological and psychological forces which influence the college student. The American College (75), edited by Nevitt Sandord, has perhaps done the most to stimulate further thought and research directed to the process and purpose of higher education. Others such as Murray, Stern and Pace, Pervin, Astin and Holland, Jacob, and many other authors have made valuable contributions to studies involving college environment and what effect the environment has on the culture of the college student.

#### Background and Development

While there is research on student characteristics and what possible impact upon the nature of the institution, few studies describe the characteristics of colleges. H. A. Murray (61) is one of a distinguished group of humanistic psychologists who had attempted to maintain the focus of the discipline on the lives of people, as distinguished from their acts. Murray stressed the need to view behavior as

an outcome of the relationship between the person (need) and environment (press). He suggested that the model for studying behavior must be the interaction between personality needs and benefits or harms of the environment. These benefits or harms are termed "press" in Murray's taxonomy. Press is reflected in the characteristic pressures, stresses, rewards, and conforming-demanding influences of the environment (79).

Murray has referred to a need simply as:

. . . a nonobservable construct or intervening variable, which belongs . . . to the category of disposition concepts. It is a state in short, that is characterized by the tendency to actions of a certain kind (79, pg. 6).

He noted that there were two significant aspects to the definition of needs. First, needs are functional in character, being identified with the goals or purposes that an interaction serves for the individual. A listing of needs is essentially a taxonomy of the objectives that individuals characteristically strive to achieve for themselves. The second characteristic of a need is that it is revealed in the modes of behavior employed by the individual. In this sense, a listing of needs is sometimes inferred from behavior. Likewise, the determination of needs characterizing an individual can only be from an examination of the interaction in which he engages. Needs may therefore be identified as a taxonomic classification of the characteristic spontaneous behaviors manifested by individuals in their life transactions.

Press referred to the phenomenal world of the individual, the unique and inevitable, private view each person has of the events in which he takes part. The concept of press includes conditions which establish what is referred to as the climate or atmosphere of an institution and are found in the structure created or tolerated by others. The acceptance of these conditions depends entirely upon the group.

Therefore, press may be defined (like needs) as a taxonomic classification of characteristic behavior manifested by aggregates of individuals in their mutual interpersonal transactions. (See Appendix B.)

From this concept of a "need-press continuum," an exactness was developed which was applied to assessment studies. Stern (82) demonstrated that prediction of performance is improved as one defines the psychological demands (environment press) of the situation in which an individual performance is to take place. Subsequently, the College Characteristics Index, an instrument designed to measure aspects of the academic press (and based upon the need-press concept), was developed by Pace and Stern (67). (See Appendix A.)

#### Related Research on Environment

The testing instrument devised by Stern and Pace (67), the College Characteristics Index (CCI), utilized Murray's theory of need and press by synthesizing data about the students and their environment in a single study. Studies of this sort are useful in determining how much diversity exists among student bodies of various colleges or how much diversity exists within a student body of one given college.

Stern and Pace (79) view the institution as a kind of mosaic, composed of environmental press and individual needs. Press is reflected in the pressures, stresses, and rewards enforced by the college environment, and needs are those organizational tendencies which seem to give unity and direction to personality. Stern further described a listing of needs as simply those objectives an individual may establish for himself.

In the spring of 1959, the CCI was filled out by a group of students in sixty institutions. Thirty-two of these institutions were

selected for the normative sample. This sample consisted of liberal arts colleges, parochial and nonsectarian colleges, both public and private universities, and various types of professional schools. The authors ranked the scores of the thirty scales on the test in order to arrive at a general index of the degree of similarity between one college environment and another. The rank order correlations ranged from .93 to -.87. The results of the sample revealed, especially in relation to this study, that liberal arts colleges range of correlation was .93 to .01 while teacher-training schools was .71 to -.35. Due to the wide variation in these ranges, Stern and Pace suggested that it was more helpful to examine the variation in the environmental press sources. A perusal of this will reveal the kinds of pressures and characteristics that tend to go together in similar environments or how the presence of one characteristic is related to the presence of others (79). (See Appendix D.)

Pace (66), pursuing further his attempts to identify college environment, used an environment scale rated by students. He found that students were best able presumably to describe their college environment. According to Pace (66, pg. 21), "About thirty percent of the distinctive environment of a school is accounted for by the distinctive character of the students it admits."

Again Pace insisted that the major factors which account for the differences in college environments were intellectual and social; furthermore, there seems to be two types of intellectual emphasis--humanistic and scientific. He concluded that there were five types of environments which can be noted.

1. The first type of college environment is identified by high scores on the press scales for humanism, reflectiveness,

understanding, objectivity, energy, and achievement. The school is likely to be characterized by the opportunities offered for students to participate actively in art, music, and drama, by long intellectual discussions among students, by frequent concerts and art exhibits attended by large numbers of students, by emphasis on future graduate study, and particularly by the school's reputation for academic freedom.

2. A student body sample scoring high on the press scales of scientism, change, and fantasied achievement and low on the press scores of closeness of achievement and order might be in the type of college environment characterized by excellent laboratory facilities in the natural sciences, by a great number of professors actively engaged in research, by a divergent student population representing a great variety of nationality, religion, and social status, by little conformity among students in dress, and by the lack of closely supervised student organizations and class attendance.
3. The third type of environment may be denoted by high scores on the scales of practicality, abasement, dominance, play, and sex. This school is represented by students who have a high concern for establishing a type of status with their peers and for accepting their status in relation to authority. The school offers many practical courses, such as report writing. Students generally are preparing for careers in business, management, or other practical careers; students do not criticize the administration or teaching practices, as a rule; there is a socially-active student government and a recognized group of student leaders; and there are many and varied social events throughout the year.
4. The fourth type of college environment is represented by high scores on the scales of affiliation, nurturance, succorance, and conjunctivity. This environment is characterized by a surplus of esprit de corps, such as get-acquainted activities and a first name basis between students and faculty; the school is notable for its friendliness; the school emphasizes its responsibility for preparing the student for a greater service to his community; and the activities in such an environment are carefully planned and supervised.
5. Scores high on the press scales of aggression and impulsion differentiate the fifth type of college environment. This college is characterized by an apparently noisy and boisterous student body. These students are frequently inattentive at concerts and lectures, and they seem to expect others to adapt to them. There is a surplus of student escapades, and many of the activities are spontaneous and unplanned. Confusion and disorganization reign not only among the students in their work but also among the faculty in their work (65, Pg. 23).

Pace emphasized that aspects of any of these five environmental types could be found on any given campus. Nevertheless, according to data collected from the Activities Index, which measured needs, and the College Characteristics Index, which measured press, college students tend to migrate to the type of environment which seems best suited to meet their needs.

Stern (81) reported that there is a difference in the subcultural population within a complex university. After collecting data with the College Characteristics Index from students at a large eastern university, Stern noted that the average scale value of the press scores provide a reliable basis for denoting press trends, but a certain amount of variability suggests a subcultural difference, for three of the sixteen groups of seniors had distinctly different impressions of the university.

A study was conducted by Ducanis (21) to determine if there were differences in the students' satisfaction with the environment at a large complex university. The students enrolled in the School of Education were compared on the basis of age, grade point average, sex, and credit load. The students who indicated more satisfaction on an attitude scale devised by the researcher were those students who also indicated that the press of the university environment was high on the College Characteristics Index press scales of achievement, adaptation, affiliation, conjunctivity, ego achievement, emotionalism, energy, objectivity, reflectiveness, succorance, and scientism. The College Characteristics Index press scores of the less satisfied students were high on the abasement and aggression scales. Statistical analysis supported the conclusion that there were significant differences in the



characteristics and perceptions of the environment by students who were more satisfied and less satisfied with their environment.

Larkin's (54) study of intra-institutional environments at a large mid-western university reported significant differences between the six undergraduate colleges on from one to nine of the eleven College Characteristics Index factors. Differences were also found to be significant between the sexes, juniors and seniors, and various housing groups. Only four of the eleven factors showed significance. When comparisons were made of students in three grade point average groups, no significant difference was found on any one of the eleven CCI factors.

Keith (52) conducted a study of intra-institutional environment at a large southern university to determine the relationship between students' personal needs and environmental presses existing in the undergraduate colleges and to determine if a congruency existed between academic performance and personal satisfaction to needs and press satisfaction. He found significant differences in certain environmental presses and in personal needs in each college subdivision, but he found no significant relationships between satisfaction of the personal needs systems of the students and their expressed personal satisfaction with their college of enrollment.

#### Studies Related to Attitudes and Values

Although studies have demonstrated that significant changes occur in the attitudes, values, interests, and beliefs of college students between the freshman and senior years, because of the absence of a non-college control group in most cases, these changes cannot be directly related to college education (69). The evidence, based on pre- and

post-test scores obtained from thousands of college and non-college peer groups over a period of two to four years, indicated that college students changed considerably more than their peers who did not enter college. This was true when controlling for academic aptitude and socio-economic status.

In spite of the changes in students' attitudes and values uniquely associated with a college education, questions remain regarding the amount colleges actually contributed to those changes. Plant (73) concluded that the reported changes in personality characteristics resulting from college attendance may well be developmental changes in personality characteristics for bright young adults regardless of their higher educational attainment during a given period of time.

Trent and Medsker (85) concluded that college might only be a facilitating agency providing the opportunities for change for those students already predisposed to change. Likewise, Lehmann, Sinks, and Hartnett (56) suggested that college education per se is not instrumental in bringing about personality changes, although attendance might facilitate this development. Therefore, college faculties and administrators must realize that they are not necessarily providing a unique experience for their students, but that maturation and the social environment might have more impact on personality development than courses and formal academic experiences.

Feldman and Newcomb (24) posit the principle of accentuation. They stated that those characteristics which impel a person toward a particular educational setting are the characteristics which are reinforced and strengthened by that setting. Processes of attraction are similar to processes of impact.

They further suggested that this process could be delimiting--if colleges, departmental majors, and peer groups apply ever more restrictive criteria of selection, the student's world would be narrowed to students and teachers like himself.

Problems in the interpretation of the amount and process of college impact are illustrated in the research of Eddy (22) and Chickering (17). The study by Eddy (22) examined the part played by the "campus climate" in changing the attitudes and values of college students. Eddy found that experiences outside the classroom were a significant factor in the development of character and that particular aspects of the environment had the power to reinforce or negate all that the college had to offer. He concluded that an environment best suited for the development of character was the statistical result of unity in common goals and that the "level of expectancy" in all matters concerning the student in the college environment was a highly important determinant of what happens to him.

Chickering (17), in his study, administered to entering freshmen at 13 small colleges the Omnibus Personality Inventory after their first year and second year. Institutional differences were measured by a College Goals Rating Sheet, the College and University Environment Scales, and campus visits. The test-retest data indicated that most student change was found in Autonomy, Impulse Expression, Aestheticism, and Practical Orientation, while least change was found in Intellectual Interests, Social Extroversion, and Altruism.

These findings were the same for both men and women, were irrespective of their mean scores at entrance, and the changes were highly consistent for all colleges. That is, the change occurred among many

different kinds of students attending many different institutions. However, the evidence did not support the assumption of campus-wide impact. The colleges sample ranged from a student-centered school with a highly flexible curriculum to a college with a highly structured curriculum. Whether or not the institution had a traditional approach to curriculum and teaching or a flexible and innovative approach stressing independent study and student-centered courses, there was little increase in intellectual difference.

Clearly, the impact of college is not simple or clear-cut. There has been little evidence that any one factor explains changes in attitudes and values. And, although most research on this subject indicates that college students change in some areas, very little is known about how or why.

In relation to the study at hand, more attention needs to be given to the independent effects of specific courses and programs in this context versus the cumulative effects of the total college experience.

Two studies conducted by Astin (2) investigated student input variables. A factor analysis of 52 student input variables yielded six major dimensions: Intellectualism, Aestheticism, Status, Leadership, Pragmatism, and Masculinity. A comparison was made of the presumably independent estimates of student and institutional characteristics of students and institutional characteristics derived from the above studies.

In summary, Astin reported that characteristics of entering freshman classes were highly related to institutional characteristics: high-ability students were exercising a high degree of self-selection in deciding where to attend college, and in general the aspirations of the entering students appeared to be well-suited to the curricular offerings

of the particular institution. Multiple analyses indicated that five of the six freshman input factors (intellectualism, aestheticism, status, masculinity, and pragmatism) could be estimated with substantial accuracy from known characteristics of the institution.

The extent to which academic programs adequately serve the goals of college students was researched indirectly through studies of college withdrawals (5). Astin (6) discovered no significant relationship between the characteristics of an institution and the rate of attrition among male students. Women's chances of withdrawing, however, were found to increase if they attended a college with a relatively high proportion of men in the student body.

A 1965 study by Astin (3) was undertaken to determine if there were consistent differences related to the various fields of study in the classroom environments of different college courses. More specifically, the objective was to see if the behavior of the instructor, the behavior of the student, and the interaction that occurred in classes in various fields differed systematically from one another in such a way that various fields of study could be classified on the basis of the similarities and differences found. The findings supported the hypothesis that the college environment was affected by the relative proportions of students and faculty in various fields of study.

Creager and Astin (20) examined the interrelations among 70 administrative and environmental variables used in describing 244 four-year colleges and universities. Astin postulated that although there was a logical distinction between variables that described an institution's structure (e.g., public versus private) and variables that described its environment, it was reasonable to suppose that these two types of

variables were statistically related to each other and functionally related to outcomes. Further, if one assumes that environmental variables are more strongly influential in student development, then it was important to determine if the commonly used administrative variables (e.g., geography and size) had negligible relationships with those environmental variables. If so, administrative variables should be of limited value in studying differential college influence on student development.

#### Studies Related to Black Colleges and Students

Although empirical studies are few, there is growing awareness and recently considerable evidence to support the hypothesis that some differences in the psychological functioning between black and white subjects may be due to a great extent to the situational variables within the social setting of the experiment rather than a difference inherent in the race (16).

Baratz (7) investigated the effect of race of the examiner on the level of reported anxiety of black subjects through the administration of the Test Anxiety Questionnaire to 120 undergraduates under eight experimental conditions. Black subjects tested by a black examiner reported less anxiety than those tested by a white examiner, and Bratz concluded that the level of reported anxiety was dependent upon the stress characteristics of the immediate social situation.

Harris and Reitzel (31) explored differences in freshman grade point average, the verbal and mathematics forms of the Scholastic Aptitude Test (SAT), and rank in high school graduating class in order to assess the comparative value of black students' high school rank

versus the high school rank of the total freshman population as a predictor of freshman grade point average.

The black freshmen in a predominantly white university obtained lower SAT scores on both forms and obtained lower than average freshman grade point averages although their high school rank was above average. The blacks' academic achievement was best predicted when the forecast was made for them as a group rather than as undifferentiated members of the freshman class. The data suggested that either the precollege education of these black students was less adequate than that of the total freshman population or that grading standards in high schools from which the blacks came were more lenient. Current researchers support the former possibility more than the latter (8).

A comprehensive treatment of the problems of the black student in higher education was the subject of the Summer 1967 issue of the Journal of Negro Education. Charles H. Thompson (84) presented a critical summary of the issue which emphasized the need for adequate higher educational opportunities for blacks. Thompson stated that such opportunities could be provided by greatly improved predominantly black institutions and increased enrollment of blacks in predominantly white higher education institutions. He urged that each of the four-year predominantly black colleges engage in a self-study . . . which will eventuate in a long-range plan for the development of each institution.

One of the most salient facts regarding the students in the predominantly black institutions is that so many of them do not have the attributes which are associated with "success." In comparing Black students attending predominantly black institutions with Black students attending predominantly white institutions, as reported by Bayer and

Boruch (8), Black students attending predominantly black institutions had lower test scores, lower family income, more fathers who were manual or farm workers, and parents who had less education.

The prognosis appears to be, then, that a large number of the students in four-year predominantly black colleges will not achieve their first ambition--receipt of a baccalaureate. Very likely the proportion who are successful will continue to be of the historical order of 40 to 50 percent of those who entered.

One may wonder why these students persist in college with all the odds measured against them. What causes this level of aspiration to be high as measured by the College Characteristics Index? Pace (66) contended that the reason may be due to a perception in the way in which the black student views his environment. Thus, his desire to succeed becomes a motivating force in itself.

The Carnegie Commission Report set forth several problems confronting traditionally black colleges and universities in the 1970's. Until recently, the traditionally black college educated the overwhelming majority of black students and employed a similar proportion of black college professors. But over the past five or six years, traditionally black colleges have had to compete increasingly with traditionally white institutions for students and faculty (14).

Of the total black enrollment in colleges throughout the nation, only one-half is in traditionally black colleges.

The report urged that black colleges should begin to redefine their role and function, not on the basis of past accomplishments, but for purposive actions in a decade that is likely to present new problems. The report further addressed the future role of black colleges by suggesting that they reshape these institutions (15).



### Grades As Related to Academic Achievement

Previous grades, of course, remain the predominant variable for predicting future academic achievement. Holland and Astin (37), among many others, had found the best predictor of academic achievement in college was high school grade point average. They found this particularly true when students also had high self-ratings of scholarship. In fact, many investigators have been moving away from the old model of predicting intellectual criteria such as grades from intellectual predictors and have displayed an interest in nonintellectual predictors or correlates of grades such as self-ratings of achievement potential. Heist and Webster (34), for example, presented data to illustrate that attitudes, values, and interests of students should not be overlooked as supplements to the more traditional selective criteria. They argued that the intellectual climates provided by student attitudes and values must be understood and taken into account before institutional objectives can be realized.

Goodstein and Heilbrun (27) studied the contribution of scores on the Edwards Personal Preference Schedule to achievement at three levels of ability. They found that personality factors contribute most to the prediction of the academic achievement of the average college male. Heist and Williams (34) reported a significant difference among three achievement levels in terms of a system used to classify Strong Vocational Interest Blank profiles for degree of intellectual disposition. The high achievers were described as being more strongly oriented toward inquiry and speculative and creative thought than the other two achievement groups. Within their homogeneous sample of bright science majors, however, most other differences were slight.

Several other studies challenged the use of grades as either the only criterion for or predictor of academic success. Holland (35) developed an achievement scale based on the number of original papers published, prizes won, and inventive projects completed by the student and found that these creative achievements were unrelated to grades. In parallel findings, Locke (57) reported that academic success as judged by self-initiated activities performed outside the classroom did not correlate with academic performance in the structured classroom situation.

Ramsey (73) found that, although differences in academic behavior among Harvard Law School freshmen drawn from five types of undergraduate colleges could be correlated primarily with undergraduate grade point averages, differences in academic performance were also strongly related to father's occupation, family income, type of secondary school attended, religious affiliation, and region of residence. Ramsey concluded that individuals with contrasting cultural orientations perceived academic roles in different ways and that these perceptions shifted during the student's academic career. Lavin (55), however, analyzed studies to determine the validity of ability, personality, and sociological variables as predictors of grade point average. None of these variables accounted for the variance in grade point average.

✓ Critics of competitive grading systems contended that students will learn more when the deleterious effects of competitive grading are reduced or eliminated and that encouraging learning through grades as incentives is contrary to the contemporary educational philosophy which says a student should study because he is interested in the subject, not the grade (18).

After conducting an extensive review, Hoyt (38) concluded that college grades have no more than a modest correlation with adult success no matter how success is defined. He also suggests the use of a profile of student growth and development instead of grades. And, as a matter of fact, there are increasing questions about the use of grades, as such, in higher education. The questions center particularly on the use of grades as an incentive to learning.

## CHAPTER III

### METHODOLOGY AND DESIGN

#### Introduction

The purpose of this chapter is to describe the following: (1) Five College Curriculum Innovative Thrust program; (2) population of the study; (3) testing instruments; and (4) statistical methods used to test the hypotheses of the study.

#### Five College Curriculum Innovative Thrust

The Five College Curriculum Innovative Thrust (FCCIT) was an attempt to develop programmatic ways of increasing the academic competence of low-income students. It also represented an effort to develop teaching strategies and curriculum materials to motivate students to succeed. The program examined to what extent newly designed curricula with relevant and intellectually significant units of study could overcome the deficiencies of college students from intellectually less demanding environments.

The materials and techniques that had been developed for FCCIT were based upon three assumptions: 1) Students could be more effectively motivated to learn and to become involved in the learning process when they were placed in a student-centered academic environment in which pedagogy and curriculum materials combined to ignite their intellectual curiosity; the encouragement of a free exchange and expression of their

life styles, ideas, reflections, private insights and experiences; and the building of more positive self-image. 2) Optimum learning conditions are more apt to occur if teachers assumed roles as student guides and curriculum innovators, than assume the stance of classroom arbiters, and presumably, sources of all worthwhile knowledge. 3) Teachers, when freed from the structure of syllabi and rigid course content, could become more creative and responsive to students' needs and, thereby, make their teaching more pertinent to the students and more enjoyable for themselves.

The educational development efforts of the Five College Curriculum Innovative Thrust program at Langston University were aimed at 1) developing course content in English, mathematics, social science, physical science, biology, humanities, and philosophy that would be more topical and germane to the student's experience than those materials traditionally used; 2) defining current problems in the teaching of these courses, along with the ramifications of and possible solution to those problems; 3) deriving a philosophy of education that would stimulate teachers enough to think of the need for altering their attitudes toward their role in the classroom and their students' academic problems and basic needs; and 4) developing methodologies and techniques that would stimulate and improve students' learning processes, and motivate students to assume an active role in their own learning.

#### FCCIT vs. Traditional Program

The FCCIT Program enrollment was open only to a randomly selected group of freshmen students. The remaining freshmen were enrolled in the regular or traditional program offered by the university. Freshmen

programs included English, mathematics, social science, and natural science. The FCCIT program students listed their courses as: Ideas and Their Expression (English), Quantitative and Analytical Thinking (Mathematics), Social Institution: Their Nature and Change (Social Science), and Natural Science (Physical and Biological Sciences).

The course on Ideas and Their Expression treated together the study of writing (or "composition") and the study of the humanities, literature for the most part. Writing as usually taught has one such objective, as learning to write clear expository prose. The FCCIT program viewed the teaching of writing in a larger context. What the student says and how he says it was viewed as part of his own search for identity and competence. The student writes what he is and becomes what he writes. And literature as usually taught was the coverage of a standard list of great books. The FCCIT program viewed the study of literature also in a larger context. Emphasis was placed upon the fundamental purpose of literature in connection with life and the enforcement of life. The students judged literature and art against the experiences of their own life, hence the greater choices of experiences, the enlargement of life. The curriculum material for the English course consisted of four sequences of units developed around the themes of responsibility, love, choice, and self and alienation.

Each sequence was approximately equivalent to one semester's course of study. Each sequence provided a variety of works, simple, complex, classical, modern, representing all areas. The materials for each sequence had built into them pedagogical approaches that relied heavily upon the use of a student-centered classroom with a flexible, inductive teaching style. The materials were designed to stimulate students to

question, research independently, challenge, stimulate group participation, and ultimately to write and read more widely and more effectively.

The course Quantitative and Analytical Thinking (Mathematics) consisted of 14 sequential units. Each instructor made his own selection of units depending upon what he and his students were interested in.

Traditionally, mathematics approaches the subject, which is already invented and developed, whose content is abstracted and generalized from sources in imagination and the physical world. The FCCIT approach to teaching mathematics addresses itself to three audiences of students, students who were planning a career as a mathematician; students who needed mathematics for other professions; and students who needed enough math to meet the demand of ordinary daily affairs. The FCCIT approach, which was designed for students grouped together, sought to engage the student and instructor in the initial process of abstraction and generalization and in the invention of mathematical systems. The purpose of the course was not only to impart skills and facility but also to give students a better feeling for the intuitive and creative element in mathematics.

The teaching of social science in the freshmen year typically began either with a grand survey of the subject--the development of mankind--or it began with an introduction to one of the disciplines of the field--economics, sociology, history, geography, anthropology, political science, psychology. The two approaches had one thing in common, however. In both cases the work was based on questions raised by other people and on the answers found by them.

The FCCIT course, Social Institution, had developed themes which embrace several of the traditional disciplines but which were not

grandiose in design as the usual survey course. The approach sought to relate work in class to the student's experiences, to what they were familiar with, to what they were physically close to, and to let students build their own explanations and theories through exercises starting from this base. The course also investigated the views of recognized scholars on various topics, but in addition considered why different scholars held different views about the same phenomenon; how their sources of support and prestige, their closeness or distance from a situation, affected their views. The course consisted of three sequential areas of study.

The traditional class consisted of lecture periods and the reading of one or two textbooks. In contrast to the traditional practices, the FCCIT instructors encouraged open discussion, panels, out-of-class work by small groups. Extensive use was made of movies, film strips, tapes, and records.

The course in natural science, like mathematics, had the problem of addressing several audiences simultaneously. The course prepared students who plan to major in science for the next course in the catalogue. At the same time it served as a terminal course in science for the non-scientist. The major task was to reduce repugnance for science, fear of science, and generate an appreciation for science through new methods and techniques.

The course Natural Sciences (Physical and Biological) contained seven and eight units respectively. The instructor constructed the course around the sequence of units that best suited the interests and backgrounds of students.



Each unit started with a fundamental concept and developed in a spiral fashion through a hierarchy of levels. Each level contained the development of at least one fundamental idea from empirical data obtained in the laboratory, the demonstration of the utility of the concept, and a natural termination point. The effective use of these units strongly depended on students' input and individual responses. Laboratory experiences were designed to place students into working contact with principles that naturally lead them to ask questions and discover for themselves the hidden laws.

#### Special Services

The FCCIT program students were provided special counselors. The program counselor was the central unifying element between students, program faculty, and administration. The counselor's role was developed largely in response to the needs of FCCIT students in "transition" working for positive change within the institution. Counselors kept records, provided unilateral information on available college services-- who to see, where to go, etc. And also provided assistance in developing positive student-oriented programs such as:

- Tutorial programs that were in many instances student directed.
- Group counseling sessions as a means of getting student reaction to individual, as well as group problems in a group setting.
- Student seminars to enlarge the classroom focus on topics ranging from drugs, birth control, black awareness.
- Student involvement programs for those students who were concerned with utilizing their education to attack problems and meet the needs of the community or similar communities to those from which they originated.

- Student-teacher small group interaction relating to course content and in many instances special interest instruction.
- Student services based on background knowledge of the student.

In addition, the counselor served as the liaison person between the student and the institutional structure. But most of all, the traditional function of the counselor to the student was individual counseling or more simply stated, provider of support and an understanding ear.

The counseling program was most vital in that the student had a positive source from which he could seek sound and mature judgments regardless as to whether they were academic or social in nature.

#### Population of the Study

The subjects in the study were randomly selected students who entered Langston University as freshmen in the 1970-71 fall semester, and had completed their fourth year at the university. Only those students who had ACT profile scores, CCI scores, and composite grades available were included in the study. Students had been randomly assigned to either the traditional program or to the FCCIT program. From these two groups those students having both an ACT profile and a composite grade point average available were administered the CCI. In total 87 students met the above criteria for being included in the study. To ensure confidentiality, student identification or social security numbers were assigned in place of names.

The subjects taught by the traditional method constituted the control group. The traditional approach was characterized by a single teacher who chronologically surveyed the course by use of the lecture method. Students taught by the Five College Curriculum Innovative Thrust approach constituted the experimental group. The FCCIT approach was characterized by teachers and students who organized content of the course around interests, needs, and a body of knowledge useful to the individual and society.

#### Testing Instrument

The purpose of this section is to acquaint the reader with the instrument used in gathering the data for this study.

The testing instrument used was the College Characteristics Index developed and revised by Stern and Pace. The CCI contains 300 items or phrases, which describes a particular condition of environmental press. By responding to the items or phrases "true" or "false," the subject responds "true" if the institutional characteristic described in the item is "Generally true or characteristic of the college" and "false" if "Generally false or not characteristic of the college." The instrument measures eleven environmental factors: Aspiration Level, Intellectual Climate, Student Dignity, Academic Climate, Academic Achievement, Self Expression, Group Life, Academic Organization, Social Form, Play-Work, and Vocational Climate.

Pace and Stern (67) defended the validity of the CCI by noting that the most important approach to test efficiency was to treat validity and reliability together. They reported that they had found high correlations between the scores from responses of students and faculty concerning the environment of the same institutions (concurrent validity).

Stern (78) reported that scores on the CCI from undergraduates in 32 colleges produced reliability coefficients for the 30 scales ranging from .34 to .81, using the test, retest method. These reliabilities were for the scales which had ten items each, and the average scale reliability of .67 for the items were very close to the practical maximum for scales of such relatively short length in description. An item analysis was performed, and poor items were eliminated, which produced a more reliable version.

#### Statistical Procedure

The purpose of this section is to present the statistical procedure used to test the hypotheses of the study. One statistical procedure was utilized to accomplish this goal.

The statistical procedures used to test the hypotheses of the study was a t-test of difference of means of two correlated samples. This procedure was applied to the four hypotheses that dealt with the comparison of the academic achievement in four subject areas and to the eleven hypotheses that dealt with the perceptions of college environment as measured by the CCI between the two sample groups.

When a significant difference was found between the means of the variables of the two sample groups and were significant at the .05 level of confidence, an analysis of the results was made.

#### Summary

In summary, the FCCIT program served two purposes: 1) to develop students who will be able to focus not only on the materials and content of the courses, but also on the teachers who had the responsibility to

direct their course of study, throughout the duration of the program; and 2) to graduate students who will be able to compete with the world on their own terms and to work to change it for the better.

Traditionally, the educational system has emphasized the acquisition of contextual facts and ideas in subject matter areas. However, the FCCIT program allowed for differentiated interests in subject matter areas. These differentiated interests provide a framework for planning the content of the courses.

The traditional role of the instructor in many predominantly black colleges has been authoritarian in nature. The FCCIT program viewed the instructor differently. The instructor was viewed as a learner and a scholar; a learner because of the utilization of newer and different methods and techniques employed in directing the specified course of study and a scholar in the usual sense of keeping abreast with developments in his/her field and cognizant of learning how to teach more effectively.

Ultimately, the program hopes to demonstrate the possibilities of a reduction in attrition rate, particularly in the two years of college; and to have a group of students enter their junior year with a level of academic preparation and positive attitudes toward learning that will improve the quality of work they do in their academic majors. The major differences between the traditional and the FCCIT programs are the approach in accomplishing these goals.

## CHAPTER IV

### ANALYSIS OF DATA AND CONCLUSION

#### Presentation

The purpose of Chapter IV is to report and analyze the data that resulted from testing the 15 null hypotheses. The statistical evidence is presented in order to assist the researcher in answering the two basic research questions. The results of the statistical tests are noted above each table.

The chapter is organized under two major headings; first, the academic achievement of the experimental and control groups, which concerned the mean grade point averages; and second, the scores of the experimental and control groups as measured by the College Characteristics Index, which measured the environmental influences of the institution upon the subjects. Although the study was concerned primarily with the 87 students of the freshmen class of 1970-71, data from the freshmen class of 1974-75 are reported for comparison purposes.

#### Academic Grade Point Averages

In this section a comparison of grade point averages of 1970-71 and 1974-75 freshmen students is made. The overall grade point averages of 1974 senior students are also reported.

Table I presents a statistical comparison of the academic achievement of the experimental and control groups over a two-semester period.

Data given include the mean grade point averages of the experimental and control groups in English, mathematics, social science, and natural sciences. Also presented are the standard deviation, the t-value, and the degrees of freedom.

TABLE I  
A STATISTICAL COMPARISON OF THE ACADEMIC  
ACHIEVEMENT OF THE 1970-71 EXPERIMENTAL  
AND CONTROL GROUPS IN FOUR SUBJECT AREAS

Course	Group	Mean	S.D.	t	df
English	Experimental	3.22	0.960	2.07*	85
	Control	2.82	0.819		
Mathematics	Experimental	3.63	0.837	4.91*	85
	Control	2.83	0.675		
Social Science	Experimental	3.07	0.673	2.01*	85
	Control	2.74	0.836		
Natural Science	Experimental	3.59	0.826	4.70*	85
	Control	2.76	0.820		

\*Significant at the .05 level

Research Question One asks: Do participants in the experimental program-i.e. the experimental group-achieve better academic grades than non-participants-i.e. the control group-in the areas of English, mathematics, social science, and natural science? This question led to the development of the following hypotheses.

Hypothesis Ia. There is no statistically significant difference in the academic achievement of the experimental group and that of the control group with respect to grades received in English.

To test Hypothesis Ia, a t-test for independent groups was used as the statistical technique. The t-value obtained was 2.07 with 85 degrees of freedom, which was found to be significant at the .05 level; thus, the hypothesis was rejected. The grades of the experimental group in English were significantly higher than those of the control group (see Table I).

Hypothesis Ib. There is no statistically significant difference in the academic achievement of the experimental group and that of the control group with respect to grades received in mathematics.

To test Hypothesis Ib, a t-test for independent groups was used as the statistical technique. The t-value obtained was 4.01 with 85 degrees of freedom which was significant at the .05 level. Therefore, the hypothesis was rejected. The two groups differed in relation to obtained mathematics grades. The data presented in Table I clearly indicate higher achievement of the experimental group in mathematics.

Hypothesis Ic. There is no statistically significant difference in the academic achievement of the experimental group and that of the control group with respect to grades received in social science.

To test Hypothesis Ic, a t-test for independent groups was used as the statistical technique. The t-value obtained was 2.01 with 85 degrees of freedom and was significant at the .05 level. It was then possible to reject the above hypothesis. Social science grades differed between the experimental and control groups. The data presented in Table I again clearly reveal the higher academic achievement of the experimental group in social science.



Hypothesis Id. There is no statistically significant difference in the academic achievement of the experimental group and that of the control group with respect to grades received in natural science.

To test Hypothesis Id, a t-test for independent groups was used as the statistical technique. The t-value obtained was 4.70 with 85 degrees of freedom and was found to be significant at the .05 level. It was then possible to reject the above hypothesis. Natural science grades differed between the experimental and control groups. From the data, as presented in Table I, it is evident that the mean grade point averages in natural science again favor the experimental group in achievement.

#### Environmental Presses Perceived by Experimental and Control Groups

Tables II through XII will present statistical comparisons of the two groups' attitudes toward their college environment as measured by the College Characteristics Index. The eleven factors are:

1. Aspiration Level
2. Intellectual Climate
3. Student Dignity
4. Academic Climate
5. Academic Achievement
6. Self-Expression
7. Group Life
8. Academic Organization
9. Social Form
10. Play-Work
11. Vocational Climate

Data presented for each factor are the means, standard deviations, t-values, degrees of freedom, and p-value of the two groups.

Hypothesis IIa. There will be no significant difference between the mean CCI scores on Factor 1, Aspiration Level, of the experimental group and that of the control group.

To test Hypothesis IIa, a t-test for independent groups was used as the statistical technique. The t-value obtained was 2.09 with 85 degrees of freedom and was significant at the .05 level. Hypothesis IIa then was rejected. The two groups reflected differences in levels of aspirations. The Aspiration Level of the experimental group was significantly higher than those of the control group.

TABLE II

A STATISTICAL COMPARISON OF THE ENVIRONMENTAL PRESS (ASPIRATION LEVEL) OF THE EXPERIMENTAL AND CONTROL GROUPS

Groups	N	Mean	S.D.	t-value	df	p-value
Experimental	43	50.73	14.35	2.09*	85	0.04
Control	44	43.52	17.58			

\*Significant at the .05 level

Hypothesis IIb. There will be no significant difference between the mean CCI scores on Factor 2, Intellectual Climate, of the experimental group and that of the control group.

To test Hypothesis IIb, a t-test for independent groups was used as the statistical technique. The t-value obtained was 1.63 with 85 degrees of freedom and was not significant at the .05 level. Hypothesis IIb was accepted. The two groups perceived themselves as operating under similar Intellectual Climates (see Table III).

TABLE III

A STATISTICAL COMPARISON OF THE ENVIRONMENTAL PRESS (INTELLECTUAL CLIMATE) OF THE EXPERIMENTAL AND CONTROL GROUPS

Groups	N	Mean	S.D.	t-value	df	p-value
Experimental	43	34.89	12.31	1.63	85	0.107
Control	44	30.86	10.69			

Hypothesis IIc. There will be no significant difference between the mean CCI scores on Factor 3, Student Dignity, of the experimental group and that of the control group.

To test Hypothesis IIc, a t-test for independent groups was used as the statistical technique. The t-value obtained was 0.68 with 85 degrees of freedom and was not found to be significant at the .05 level. The above hypothesis was accepted. The two groups' perceptions of Student Dignity were similar.

TABLE IV

A STATISTICAL COMPARISON OF THE ENVIRONMENTAL  
PRESS (STUDENT DIGNITY) OF THE  
EXPERIMENTAL AND CONTROL GROUPS

Groups	N	Mean	S.D.	t-value	df	p-value
Experimental	43	58.33	12.00	0.68	85	0.497
Control	44	56.26	16.03			

Hypothesis II<sub>d</sub>. There will be no significant difference between the mean CCI scores on Factor 4, Academic Climate, of the experimental and control groups.

To test Hypothesis II<sub>d</sub>, a t-test for independent groups was used as the statistical technique. The t-value obtained was 1.64 with 85 degrees of freedom and was not significant at the .05 level. Hypothesis II<sub>d</sub> was accepted. Reported in Table V are similarities in the two groups' perceptions in relation to Academic Climate.

TABLE V

A STATISTICAL COMPARISON OF THE ENVIRONMENTAL  
PRESS (ACADEMIC CLIMATE) OF THE  
EXPERIMENTAL AND CONTROL GROUPS

Groups	N	Mean	S.D.	t-value	df	p-value
Experimental	43	42.08	17.29	1.64	85	0.104
Control	44	36.44	14.61			

Hypothesis IIe. There will be no significant difference between the mean CCI scores on Factor 5, Academic Achievement, of the experimental group and that of the control group.

To test Hypothesis IIe, a t-test for independent groups was used as the statistical technique. The t-value obtained was 2.12 with 85 degrees of freedom and was significant at the .05 level. Hypothesis IIe was rejected. The two groups were different in Academic Achievement. In Table VI, it can readily be observed that the perceived press for academic achievement reported by the experimental group was greater than that of the control group.

TABLE VI  
A STATISTICAL COMPARISON OF THE ENVIRONMENTAL  
PRESS (ACADEMIC ACHIEVEMENT) OF THE  
EXPERIMENTAL AND CONTROL GROUPS

Groups	N	Mean	S.D.	t-value	df	p-value
Experimental	43	32.22	9.86	2.12*	85	0.037
Control	44	27.34	11.56			

\*Significant at the .05 level

Hypothesis II f. There will be no significant difference between the mean CCI scores on Factor 6, Self-Expression, of the experimental group and that of the control group.

To test Hypothesis II f, a t-test for independent groups was used as the statistical technique. The t-test obtained was 1.30 with 85

degrees of freedom and was not significant at the .05 level. The above hypothesis was accepted. The two groups' perceptions appeared to be similar in relation to Self-Expression.

TABLE VII  
A STATISTICAL COMPARISON OF THE ENVIRONMENTAL  
PRESS (SELF-EXPRESSION) OF THE EXPERIMENTAL  
AND CONTROL GROUPS

Groups	N	Mean	S.D.	t-value	df	p-value
Experimental	43	29.61	11.13	1.30	85	0.197
Control	44	26.64	10.18			

Hypothesis IIg. There will be no significant difference between the mean CCI scores on Factor 7, Group Life, of the experimental group and that of the control group.

To test Hypothesis IIg, a t-test for independent groups was used as the statistical technique. The t-value obtained was 0.70 with 85 degrees of freedom and was not significant at the .05 level. Hypothesis IIg was accepted. The two groups' perceptions were very similar in relation to Group Life.

Hypothesis IIh. There will be no significant difference between the mean CCI scores on Factor 8, Academic Organization, of the experimental group and that of the control group.

To test Hypothesis IIh, a t-test for independent groups was used as the statistical technique. The t-value obtained was 1.06 with 85

degrees of freedom and was not significant at the .05 level. Hypothesis IIh was accepted. The data in Table IX shows that the two groups' perceptions were similar in relation to Academic Organization.

TABLE VIII

A STATISTICAL COMPARISON OF THE ENVIRONMENTAL PRESS (GROUP LIFE) OF THE EXPERIMENTAL AND CONTROL GROUPS

Groups	N	Mean	S.D.	t-value	df	p-value
Experimental	43	49.10	16.64	0.70	85	0.486
Control	44	46.42	16.42			

TABLE IX

A STATISTICAL COMPARISON OF THE ENVIRONMENTAL PRESS (ACADEMIC ORGANIZATION) OF THE EXPERIMENTAL AND CONTROL GROUPS

Groups	N	Mean	S.D.	t-value	df	p-value
Experimental	43	53.47	11.82	1.06	85	0.291
Control	44	50.18	16.60			

Hypothesis IIIi. There will be no significant difference between the CCI scores on Factor 9, Social Form, of the experimental group and that of the control group.

To test Hypothesis Iii, a t-test for independent groups was used as the statistical technique. The t-value obtained was 0.74 with 85 degrees of freedom and was not significant at the .05 level. Hypothesis Iii was accepted. The two groups' perceptions were noted as similar in relation to Social Form.

TABLE X  
A STATISTICAL COMPARISON OF THE ENVIRONMENTAL  
PRESS (SOCIAL FORM) OF THE EXPERIMENTAL  
AND CONTROL GROUPS

Groups	N	Mean	S.D.	t-value	df	p-value
Experimental	43	60.59	16.52	3.74	85	0.463
Control	44	57.82	18.43			

Hypothesis IIj. There will be no significant difference between the mean CCI scores on Factor 10, Play-Work, of the experimental group and that of the control group.

To test Hypothesis IIj, a t-test for independent groups was used as the statistical technique. The t-value obtained was -0.17 with 85 degrees of freedom and was not significant at the .05 level. The hypothesis was accepted as noting the similarity in perceptions related to Play-Work.

Hypothesis IIk. There will be no significant difference between the mean CCI scores on Factor 11, Vocational Climate, of the experimental group and that of the control group.



To test Hypothesis IIk, a t-test for independent groups was used as the statistical technique. The t-value obtained was 1.31 with 85 degrees of freedom and was not significant at the .05 level. The hypothesis was accepted since the data revealed the two groups' perceptions were similar in relation to Vocational Climate.

TABLE XI

A STATISTICAL COMPARISON OF THE ENVIRONMENTAL PRESS (PLAY-WORK) OF THE EXPERIMENTAL AND CONTROL GROUPS

Groups	N	Mean	S.D.	t-value	df	p-value
Experimental	43	70.82	12.78	0.17	85	0.862
Control	44	71.41	17.96			

TABLE XII

A STATISTICAL COMPARISON OF THE ENVIRONMENTAL PRESS (VOCATIONAL CLIMATE) OF THE EXPERIMENTAL AND CONTROL GROUPS

Groups	N	Mean	S.D.	t-value	df	p-value
Experimental	43	38.29	12.81	1.31	85	0.194
Control	44	34.49	14.27			

The testing of Hypothesis IIa through IIk in answering Research Question Two will be discussed in Chapter V along with conclusions

and recommendations.

Results obtained in answering research questions one and two were used to compare grade point averages between the control and experimental groups. This comparison was found to be a factor contribution significantly to the evaluation of the program. Additional information provided a comparison of overall grade point averages for the freshmen groups of 1970-71 and 1974-75, and the senior group of 1974-75. A t-test was applied to the data to obtain the mean differences between the experimental and control groups. While no hypothesis was necessary, it was interesting to note the comparison of grade point averages between the groups. The results of these analyses are presented in Tables XIII, XIV, and XV.

In Table XIII, the t-value obtained was 3.42 with 85 degrees of freedom which was found to be significant at the .05 level. From the data presented in Table XIII, it is evident that the overall mean grade point average of the experimental group of 1970-71 freshmen students was higher than the control group.

TABLE XIII

A STATISTICAL COMPARISON OF THE OVERALL MEAN  
GRADE POINT AVERAGES OF THE  
1970-71 FRESHMEN GROUPS

Groups	N	Mean GPA	S.D.	t-value	df
Experimental	43	3.37	.824	3.42*	85
Control	44	2.78	.787		85

\*Significant at the .05 level

In Table XIV, the t-value obtained was 1.22 with 99 degrees of freedom, and was not found to be significant at the .05 level. While the mean grade point average of the 1974-75 experimental group was higher than that of the 1974-75 freshmen control group, the difference was not statistically significant.

TABLE XIV  
A STATISTICAL COMPARISON OF THE OVERALL MEAN  
GRADE POINT AVERAGES OF THE  
1974-75 FRESHMEN GROUPS

Groups	N	Mean GPA	S.D.	t-value	df
Experimental	100	2.38	.750	1.22	99
Control	101	2.29	.810		99

In Table XV, the t-value obtained was 2.30 with 85 degrees of freedom and was found to be significant at the .05 level. The two groups are different in overall grade point averages. It is evident that the overall mean grade point average favors the 1974-75 Senior experimental group.

TABLE XV

A STATISTICAL COMPARISON OF THE OVERALL MEAN  
GRADE POINT AVERAGES OF THE  
1974-75 SENIOR GROUPS  
(1970-71 FRESHMEN)

Groups	N	Mean GPA	S.D.	t-value	df
Experimental	43	2.69	.836	2.30*	85
Control	44	2.46	.764		

\*Significant at the .05 level

The 1970-71 freshman experimental group had higher grade point average than the experimental group of the 1974-75 freshman students. The high GPA of the 1970-71 group could be the result of factors such as instructors, grading systems and environment. Different styles of teaching employed by instructors, ability of students, subjectivity of grading methods, and variability of time and place with regard to the environment, are exemplary of causal factors which could effect overall grade point average differences.

## CHAPTER V

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### Introduction

The purpose of this chapter is to present a summary of the study, findings, and conclusions and to make recommendations for program development and further research.

#### Summary of the Study

This study was concerned with the possible benefits entering freshmen would derive through participation in an innovative curriculum in contrast with the traditional curriculum offered at Langston University. Two research questions were proposed: (1) Do students in an experimental program achieve better grades than students in a traditional program in the areas of English, mathematics, social science, and natural science as measured by course grades? (2) Do the experiences in a college environment, influence the perceptions of the experimental and control groups as measured by the College Characteristics Index (CCI)? It was hoped that the findings of this study would contribute valuable information to Langston University and the Five College consortium of I.S.E.

Experimental and control groups were utilized in conducting the investigation. The original population consisted of students entering Langston University as freshmen in the fall semester of 1970-71. These students were randomly assigned to participate in either the Five College

Curriculum Innovative Thrust program (i.e., the experimental group) or the traditional college program (i.e., the control group). The two groups were checked for equality of scholastic aptitude, as measured by the American College Test. In the study the subjects consisted of those students in the two original groups who persisted to their senior year and were graduated - i.e., the 87 students of the class of 1974.

Data collected on the two groups consisted of 1) academic grades in the areas of English, mathematics, social science, and natural science, and 2) CCI scores of the same two groups.

The data were treated statistically to establish bases for rejection or non-rejection of the stated hypotheses of the study. The statistical method used in the data analysis was a t-test of mean differences of two independent variables.

#### Findings of the Study

The findings of the study were specifically directed toward comparisons of environmental press between two groups of students (i.e., experimental and control). The findings of the study that pertained to academic achievement (Table I, Chapter IV) revealed that participants in the experimental group achieved significantly higher academic grades for the first year than the control group in all four specific academic areas, as reported by the registrar's office. This significance was at the .05 level. No statistical procedure was used to determine the cause and effect of the significantly high differences between academic grades of the two groups.

The findings of the grade point averages in regard to the 1970-71 and 1974-75 freshmen groups (Tables XIII and XIV, Chapter IV) revealed

that the experimental groups had higher GPA's than the control groups. The 1970-71 freshmen experimental group had a higher mean grade point average than the experimental group of the 1974-75 freshmen students. However, the high GPA of the 1970-71 group could have been the result of many factors, such as the differences in the instructors involved in the two programs, incomparability of grading systems, and susceptibility to the environment in regard to time and place--the "Hawthorne effect." The findings of the overall grade point averages in regard to the 1974-75 seniors revealed that the experimental group after four years of college work maintained a higher grade point average than the control group, but the difference was not statistically significant at the .05 level.

In general, the results pertaining to the environmental press seem to indicate that very few differences existed between the experimental and control groups (1970-71 freshmen) as measured by the College Characteristics Index. Analysis of the data (Table II-XII) revealed that out of the eleven factors measured, only two factors (Aspiration Level and Academic Achievement) revealed differences in perceptions of press between the experimental and control groups.

#### Conclusions

The following conclusions and generalizations about academic grades and environmental press appeared warranted on the basis of the evidence from the present study, although statements are valid only within the population from which this study was selected, and caution must be exercised in applying or interpreting them broadly.

Several conclusions were made based on the analysis of the data. First the participation in the FCCIT program by the experimental group of freshmen in 1970-71 resulted in higher grades in all four subject areas. The higher grade point averages of the experimental group as compared with the grades of students in the traditional program for the four specific areas could perhaps be accounted for, in part, by the following: 1) the different methods and techniques employed by the instructors, 2) motivating factors in knowing that the program was experimental in nature, 3) being part of the planning, execution, and evaluation of each course, 4) the instructor assuming success in each course and grading accordingly, 5) special services, such as tutoring and guidance, individually and in groups, 6) the exercises of self-expression in the courses, and 7) conduciveness of the classroom atmosphere. Taking all these factors into consideration, one may account (at least in part) for the high marks earned by those participating in the innovative program. With special assistance given to the participants in the innovative program, one would suspect that higher grade averages would be inevitable. One could surmise that if the instructor assured experimental participants in the program of experiencing success, students' interest levels would increase, thereby resulting in higher group mean scores for the participants. This statement is not intended to mislead the reader by implying that all experimental participants reached maximum success; grades were still in the "C to C+" range.

Analysis of the data concerning environmental press revealed that there were no differences between the groups on nine of the eleven factors considered. Although students participated in two different types of programs, their perceptions of the college environment were



similar. This may be accounted for, in part, by similar socio-economic backgrounds. As noted in Chapter I, these students reflect backgrounds of inadequate academic preparation (according to SAT and ACT scores) and socio-cultural deprivation. This is typified by Pace's research in which he noted that "the distinctive environment of a school is accounted for by the distinctive character of the student it admits" (66, Pg. 22).

From the data collected, therefore, one would assume that no matter what type of instructional program a student participates in, perception of environmental press is largely a result of the student's background. However, in this study, two of the eleven environmental press factors were found to differ significantly between groups (Aspiration Level and Academic Achievement).

A high score on Aspiration Level by the experimental group may have indicated the college encourages the students to set high standards in a variety of ways. These included providing opportunities for students to participate in decision-making processes involving the administration of the school and the administration's receiving suggestions for change and innovation readily. It was implied to the student that his effort to make some impact on his environment had the probability of being successful. A high score on Academic Achievement by the experimental group indicated that the college set high standards of achievement for students. Course work, examinations, honors, and similar devices were employed for this purpose. Therefore, the FCCIT program was influential in affecting the attitudes of participating students about their ability to achieve in an academic environment.

The results of this study added to the existing literature concerning college students from low socio-economic backgrounds (as noted in

Chapter I). The findings of the study that pertained to academic achievement (Table I, Chapter IV) revealed that participants in the experimental group achieved statistically significant higher academic grades in all four specific academic areas, as reported by the registrar's office. Evidence as to the cause and effect of significantly high differences between academic grades of the FCCIT program students and the traditional program students, perhaps may point to the findings of Robinson, D'Amico and Manos (74). They concluded their study, using the Edward Personal Preference Schedule, that there may be strong relationships between needs Endurance and Achievement and Academic Achievement as measured by grade point averages. The differences in achievement may be due in part to the Endurance and Achievement and Academic Achievement as measured by grade point averages. In essence, the over-achiever's mean score was significantly higher than the under-achiever's mean score of needs Endurance and Achievement. Their study revealed results parallel to the findings of the present study in relation to Academic Achievement.

#### Recommendations for Program Development

In considering evidence obtained from this study, the following recommendations for program development at Langston University need consideration.

1. The administration should consider incorporating the FCCIT program within the structure of the University rather than as an appendage isolated from the University at large. The incorporation of the program should not be in the form of remediation for students experiencing academic difficulties.

Rather it should be integrated within the total program, in order for it to be beneficial to all students.

2. To insure effectiveness of the program, instructors should be carefully selected and trained to employ methods and techniques utilized in an innovative curricula. In-service training should be provided for faculty improvement. Evaluation and development of curriculum should be a continuous process.
3. An important factor necessary for the effectiveness of this program is supportive services, including such aids as academic tutoring and vocational and personal counseling. These aspects of the program may be largely responsible for the success experienced by the students.
4. An evaluation of the existing program at Langston University should be undertaken to determine its strengths and weaknesses. Findings should be used to eliminate components of the program that are deleterious in nature, and to build on those which have been successful in the past.
5. It is recommended that generalizations on the basis of the findings of the present study be regarded as tentative until further research is done in other situations. Generalizations based on the totality of such research may be more confidently made.

#### Recommendations for Further Research

Because of the nature of this study, it has become evident that certain factors should be undertaken for further research. The following

areas are presented because they appeared most able to yield pertinent data.

1. No attempt was made, in the present study, to examine the relationship between environmental factors and achievement in an educational setting. Further research is necessary to define specifically what these relationships are and to what degree they are effective.
2. It appears that perhaps the instrument used did not tap the crucial motivational forces which seem to be operating for students in the FCCIT program. Therefore, testing with additional relevant instruments is recommended.
3. The size of the groups made the writer somewhat apprehensive about the results. A replicated study should be made using the same procedures with a larger sample population, thereby deriving more generalizable conclusions.
4. It is recommended that an investigation of cost-effectiveness of an innovative program such as the FCCIT be done (cost-effectiveness in a sense of what the university pays for what it gets by way of results). For example, how does the cost of the instructional component of the innovative program compare with the cost of the traditional program and what procedures would be used to measure the two different instructional components?
5. Further study in the areas of academic achievement and aspiration level is recommended. An investigation of the reasons for students dropping out of the innovative program is also recommended.

### Concluding Remarks

The FCCIT program was developed to improve instructional approaches, teaching practices, student's self-image and concept, and to instill in the student the desire to successfully complete his undergraduate degree. However, there remains a need for additional supportive services and additional study to further enhance the likelihood success for this type of student.

Perhaps with this type of program, more students who might have otherwise withdrawn, will graduate and return to the society at large as successful, productive individuals.

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APPENDIX A

COLLEGE CHARACTERISTICS INDEX

# COLLEGE CHARACTERISTICS INDEX

Form 1158

George G. Stern and C. Robert Pace

There are 300 statements in this booklet. They are statements about college life. They refer to the curriculum, to college teaching and classroom activities, to rules and regulations and policies, to student organizations and activities and interests, to features of the campus, etc. The statements may or may not be characteristic of your college, because colleges differ from one another in many ways. You are to decide which statements are characteristic of your college and which are not. Your answers should tell us what you believe the college is like rather than what you might personally prefer. You won't know the answer to many of these statements, because there may not be any really definite information on which to base your answer. **Your response will simply mean that in your opinion the statement is probably true or probably false about your college. Do not omit any item.**

## DIRECTIONS

On the special answer sheet print your name, and the other information requested. Then, as you read each statement in the booklet, **blacken space**

**T**—when you think the statement is generally TRUE or characteristic of the college, is something which occurs or might occur, is the way people tend to feel or act.

**F**—when you think the statement is generally FALSE or not characteristic of the college, is something which is not likely to occur, is not the way people typically feel or act.

Be sure to fill in the whole answer space with a heavy black mark, using any #2-1/2 or softer pencil. Do not use ball point or ink.

**YOU MUST ANSWER EVERY ITEM.**

Work rapidly, going through the entire list of statements as quickly as you can. Occasionally compare item numbers from the booklet with the answer sheet space to see that they correspond. Please do not make any stray marks on the answer sheet or in this booklet. Erase all errors and stray marks completely.

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George G. Stern

**Legend: T — True.** Generally true or characteristic of the college, is something which occurs or might occur, is the way people tend to feel or act.

**F — False.** Generally false or not characteristic of the college, is something which is not likely to occur, is not the way people typically feel or act.

1. Students are encouraged to criticize administrative policies and teaching practices.
2. The competition for grades is intense.
3. In many courses grade lists are publicly posted.
4. There are no fraternities or sororities.
5. Students are conscientious about taking good care of school property.
6. The students here represent a great variety in nationality, religion and social status.
7. Most courses are very well organized and progress systematically from week to week.
8. Professors often try to provoke arguments in class, the livelier the better.
9. Students address faculty members as "professor" or "doctor."
10. There is a recognized group of student leaders on this campus.
11. Student pep rallies, parades, dances, carnivals or demonstrations occur very rarely.
12. Students here learn that they are not only expected to develop ideals but also to express them in action.
13. Discussions get quite heated, with a lot of display of feeling.
14. There is a lot of interest here in student theatrical groups.
15. Many famous people are brought to the campus for lectures, concerts, student discussions, etc.
16. There is an extensive program of intramural sports and informal athletic activities.
17. Many of the social science professors are actively engaged in research.
18. In most classes there is very little joking and laughing.
19. Receptions, teas, or formal dances are seldom given here.
20. Many upperclassmen play an active role in helping new students adjust to campus life.
21. No one needs to be afraid of expressing extreme or unpopular viewpoints in this school.
22. In many classes students have an assigned seat.
23. Students really get excited at an athletic contest.
24. It's important socially here to be in the right club or group.
25. Books dealing with psychological problems or personal values are widely read and discussed.
26. The library is exceptionally well equipped with journals, periodicals, and books in the natural sciences.
27. On nice days many classes meet outdoors on the lawn.
28. There is lots of informal dating during the week — at the library, snack bar, movies, etc.
29. Students often help one another with their lessons.
30. There is a lot of emphasis on preparing for graduate work.
31. Resident students must get written permission to be away from the campus overnight.
32. It is fairly easy to pass most courses without working very hard.
33. Student organizations are closely supervised to guard against mistakes.
34. There is a lot of group spirit.
35. Most people here seem to be especially considerate of others.
36. Courses, examinations, and readings are frequently revised.
37. Instructors clearly explain the goals and purposes of their courses.
38. When students do not like an administrative decision, they really work to get it changed.
39. Many students try to pattern themselves after people they admire.
40. Student elections generate a lot of intense campaigning and strong feeling.
41. Students and faculty are proud of their tough-mindedness and their resistance to pleaders for special causes.
42. Most students get extremely tense during exam periods.
43. Students put a lot of energy into everything they do — in class and out.
44. When students run a project or put on a show everybody knows about it.
45. Students spend a lot of time planning their careers.
46. Initiations and class rivalries sometimes get a little rough.
47. The school offers many opportunities for students to understand and criticize important works in art, music, and drama.
48. New fads and phrases are continually springing up among the students.
49. Students take a great deal of pride in their personal appearance.
50. There are courses which involve field trips to slum areas, welfare agencies, or similar contact with underprivileged people.

**Legend: T — True.** Generally true or characteristic of the college, is something which occurs or might occur, is the way people tend to feel or act.

**F — False.** Generally false or not characteristic of the college, is something which is not likely to occur, is not the way people typically feel or act.

51. The values most stressed here are open-mindedness and objectivity.
52. Students must have a written excuse for absence from class.
53. The big college events draw a lot of student enthusiasm and support.
54. There are psychology courses which deal in a practical way with personal adjustment and human relations.
55. There would be a capacity audience for a lecture by an outstanding philosopher or theologian.
56. When students get together they seldom talk about science.
57. The college has invested very little in drama and dance.
58. Student gathering places are typically active and noisy.
59. There is a student loan fund which is very helpful for minor emergencies.
60. The school is outstanding for the emphasis and support it gives to pure scholarship and basic research.
61. Students are seldom kept waiting when they have appointments with faculty members.
62. Most courses require intensive study and preparation out of class.
63. Students are expected to play bridge, golf, bowl together, etc., regardless of individual skill.
64. There are many opportunities for students to get together in extra-curricular activities.
65. Most students show a good deal of caution and self-control in their behavior.
66. There are many students from widely different geographic regions.
67. A lot of students who get just passing grades at midterm really make an effort to earn a higher grade by the end of the term.
68. People here really play to win, not just for the fun of the game.
69. Religious worship here stresses service to God and obedience to His laws.
70. Students are expected to report any violation of rules and regulations.
71. Many students here develop a strong sense of responsibility about their role in contemporary social and political life.
72. The way people feel around here is always pretty evident.
73. Few students here would ever work or play to the point of exhaustion.
74. Students have many opportunities to develop skill in organizing and directing the work of others.
75. Most students would regard mountain-climbing, rugged camping trips, or driving a car all night as pretty pointless.
76. Fire drills are held in student dormitories and residences.
77. A lecture by an outstanding literary critic would be poorly attended.
78. Many informal student activities are unplanned and spontaneous.
79. Poise and sophistication are highly respected by both students and faculty.
80. Most students here would not want pets (dogs, cats, etc.) even if they were allowed to have them.
81. Most faculty members are liberal in interpreting regulations and treat violations with understanding and tolerance.
82. Student papers and reports must be neat.
83. There are lots of dances, parties, and social activities.
84. Many courses stress the speculative or abstract rather than the concrete and tangible.
85. There are many facilities and opportunities for individual creative activity.
86. A lecture by an outstanding scientist would be poorly attended.
87. Student rooms are more likely to be decorated with pennants and pin-ups than with paintings, carvings, mobiles, fabrics, etc.
88. Most students here really enjoy dancing.
89. The person who is always trying to "help out" is likely to be regarded as a nuisance.
90. Most students have very little interest in round tables, panel meetings, or other formal discussions.
91. If a student wants help, he usually has to answer a lot of embarrassing questions.
92. Personality, pull, and bluff get students through many courses.
93. In many courses there are projects or assignments which call for group work.
94. The professors seem to have little time for conversation with students.
95. The faculty and administration are often joked about or criticized in student conversations.
96. Everyone here has pretty much the same attitudes, opinions, and beliefs.
97. Activities in most student organizations are carefully and clearly planned.
98. Channels for expressing students' complaints are readily accessible.
99. Students almost always wait to be called on before speaking in class.
100. Personal rivalries are fairly common.



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**F — False.** Generally false or not characteristic of the college, is something which is not likely to occur, is not the way people typically feel or act.

101. Boy-girl relationships in this atmosphere tend to be practical and uninvolved, rarely becoming intensely emotional or romantic.
102. There is a lot of excitement and restlessness just before holidays.
103. There are so many things to do here that students are busy all the time.
104. Most students here would not like to dress up for a fancy ball or a masquerade.
105. Most students are more concerned with the present than the future.
106. Many students drive sports cars.
107. Few students are planning post-graduate work in the social sciences.
108. Dormitory raids, water fights and other student pranks would be unthinkable here.
109. Most students here enjoy such activities as dancing, skating, diving, gymnastics.
110. Students often run errands or do other personal services for the faculty.
111. Many students have special good luck charms and practices.
112. Campus architecture and landscaping stress symmetry and order.
113. There is very little studying here over the week-ends.
114. Students are more interested in specialization than in general liberal education.
115. Modern art and music get little attention here.
116. Few students are planning careers in science.
117. This is mainly a meat and potatoes community, with little interest in gourmets or anything unusual.
118. Students spend a lot of time talking about their boy or girl friends.
119. Students here are encouraged to be independent and individualistic.
120. A lot of students like chess, puzzles, double-croctics, and other abstract games.
121. For a period of time freshmen have to take orders from upperclassmen.
122. Students who work hard for high grades are likely to be regarded as odd.
123. In most classes every student can expect to be called on to recite.
124. The school helps everyone get acquainted.
125. Many students seem to expect other people to adapt to them rather than trying to adapt themselves to others.
126. Many students travel or look for jobs in different parts of the country during the summer.
127. Assignments are usually clear and specific, making it easy for students to plan their studies effectively.
128. People around here seem to thrive on difficulty — the tougher things get, the harder they work.
129. In talking with students, faculty members often refer to their colleagues by their first names.
130. The important people at this school expect others to show proper respect for them.
131. There are practically no student organizations actively involved in campus or community affairs.
132. Most students respond to ideas and events in a pretty cool and detached way.
133. There seems to be a lot of interest here in health diets, vitamin pills, anti-histamines, etc.
134. There are a good many colorful and controversial figures on the faculty.
135. Education here tends to make students more practical and realistic.
136. Students are frequently reminded to take preventive measures against illness.
137. A student who insists on analyzing and classifying art and music is likely to be regarded as a little odd.
138. Students often start projects without trying to decide in advance how they will develop or where they may end.
139. Students who are not properly groomed are likely to have this called to their attention.
140. The college regards training people for service to the community as one of its major responsibilities.
141. A well reasoned report can rate an A grade here even though its viewpoint is opposed to the professor's.
142. Professors usually take attendance in class.
143. New jokes and gags get around the campus in a hurry.
144. Family social and financial status may not be talked about but everyone knows who's who.
145. The student newspaper rarely carries articles intended to stimulate discussion of philosophical or ethical matters.
146. Course offerings and faculty in the natural sciences are outstanding.
147. There is a lot of interest here in poetry, music, painting, sculpture, architecture, etc.
148. Bermuda shorts, pin-up pictures, etc., are common on this campus.
149. There is a high degree of respect for nonconformity and intellectual freedom.
150. "Alma Mater" seems to be more important than subject matter" at this school.

**Legend: T — True.** Generally true or characteristic of the college, is something which occurs or might occur, is the way people tend to feel or act.

**F — False.** Generally false or not characteristic of the college, is something which is not likely to occur, is not the way people typically feel or act.

151. No one is expected to suffer in silence if some regulation happens to create a personal hardship.
152. Examinations here provide a genuine measure of a student's achievement and understanding.
153. Students' mid-term and final grades are reported to parents.
154. Students almost never see the professors except in class.
155. Students occasionally plot some sort of escapade or rebellion.
156. Most students dress and act pretty much alike.
157. Faculty advisers or counselors are pretty practical and efficient in the way they dispatch their business.
158. If a student fails a course he can usually substitute another one for it rather than take it over.
159. A lot of students here will do something even when they know they will be criticized for it.
160. There are no favorites at this school — everyone gets treated alike.
161. Students are actively concerned about national and international affairs.
162. An open display of emotion would embarrass most professors.
163. Students get so absorbed in various activities that they often lose all sense of time or personal comfort.
164. It is easy to obtain student speakers for clubs or meetings.
165. There is little sympathy here for ambitious day-dreams about the future.
166. Drinking and late parties are generally tolerated, despite regulations.
167. When students get together they seldom talk about trends in art, music or the theater.
168. There seems to be a jumble of papers and books in most faculty offices.
169. There are no mirrors in any of the public rooms or halls.
170. There is a great deal of borrowing and sharing among the students.
171. Some of the professors react to questions in class as if the students were criticizing them personally.
172. The campus and buildings always look a little unkempt.
173. Everyone has a lot of fun at this school.
174. Many students enjoy working with their hands and are pretty efficient about making or repairing things.
175. Special museums or collections are important possessions of the college.
176. Laboratory facilities in the natural sciences are excellent.
177. The library has paintings and phonograph records which circulate widely among the students.
178. There are several popular spots where a crowd of boys and girls can always be found.
179. Most of the faculty are not interested in students' personal problems.
180. Very few students here prefer to talk about poetry, philosophy, or mathematics as compared with motion pictures, politics, or inventions.
181. Faculty members are impatient with students who interrupt their work.
182. Students set high standards of achievement for themselves.
183. Students quickly learn what is done and not done on this campus.
184. Faculty members rarely or never call students by their first names.
185. When students dislike a faculty member they make it evident to him.
186. There are many foreign students on the campus.
187. In most classes, the presentation of material is well planned and illustrated.
188. Everyone knows the "snap" courses to take and the tough ones to avoid.
189. Professors seem to enjoy breaking down myths and illusions about famous people.
190. Anyone who knows the right people in the faculty or administration can get a better break here.
191. Students are encouraged to take an active part in social reforms or political programs.
192. Graduation is a pretty matter-of-fact, unemotional event.
193. Faculty members put a lot of energy and enthusiasm into their teaching.
194. There is a lot of fanfare and pageantry in many of the college events.
195. Nearly all students expect to achieve future fame or wealth.
196. All undergraduates must live in university approved housing.
197. Humanities courses are often elected by students majoring in other areas.
198. Students who tend to say or do the first thing that occurs to them are likely to have a hard time here.
199. There are definite times each week when dining is made a gracious social event.
200. A good deal of enthusiasm and support is aroused by fund drives for Campus Chest, CARE, Red Cross, refugee aid, etc.

**Legend: T — True.** Generally true or characteristic of the college, is something which occurs or might occur, is the way people tend to feel or act.

**F — False.** Generally false or not characteristic of the college, is something which is not likely to occur, is not the way people typically feel or act.

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| 201. There always seem to be a lot of little quarrels going on.  | 226. Students rarely get drunk and disorderly.   |
| 202. Most student rooms are pretty messy.  | 227. Course offerings and faculty in the social sciences are outstanding.  |
| 203. It's easy to get a group together for card games, singing, going to the movies, etc.                    | 228. Spontaneous student rallies and demonstrations occur frequently.  |
| 204. The academic atmosphere is practical, emphasizing efficiency and usefulness.                            | 229. Proper social forms and manners are important here.   |
| 205. Tutorial or honors programs are available for qualified students.                                       | 230. Many church and social organizations are especially interested in charities and community services.                                       |
| 206. A student who spends most of his time in a science laboratory is likely to be regarded as a little odd. | 231. The faculty tend to be suspicious of students' motives and often make the worst interpretations of even trivial incidents.                |
| 207. There are paintings or statues of nudes on the campus.  | 232. Classrooms are kept clean and tidy.   |
| 208. Students frequently go away for football games, skiing weekends, etc.                                   | 233. There isn't much to do here except go to classes and study.   |
| 209. Students commonly share their problems.   | 234. The college offers many really practical courses such as typing, report writing, etc.   |
| 210. Most of the professors are dedicated scholars in their fields.  | 235. Long, serious intellectual discussions are common among the students.   |
| 211. The school administration has little tolerance for student complaints and protests.                     | 236. Many of the natural science professors are actively engaged in research.  |
| 212. Standards set by the professors are not particularly hard to achieve.                                   | 237. In papers and reports, vivid and novel expressions are usually criticized.  |
| 213. Frequent tests are given in most courses.   | 238. Some of the most popular students have a knack for making witty, subtle remarks with a slightly sexy tinge.                               |
| 214. Students spend a lot of time together at the snack bars, taverns, and in one another's rooms.           | 239. The professors go out of their way to help you.   |
| 215. Students are sometimes noisy and inattentive at concerts or lectures.                                   | 240. In class discussions, papers, and exams, the main emphasis is on breadth of understanding, perspective and critical judgment.             |
| 216. The history and traditions of the college are strongly emphasized.                                      | 241. Students don't argue with the professor; they just admit they are wrong.  |
| 217. Most students follow a systematic schedule for studying and recreation.                                 | 242. Learning what is in the text book is enough to pass most courses.   |
| 218. No one gets pushed around at this school without fighting back.   | 243. The professors regularly check up on the students to make sure that assignments are being carried out properly and on time.               |
| 219. Faculty members and administrators see students only during scheduled office hours or by appointment.   | 244. Students frequently study or prepare for examinations together.   |
| 220. Students exert considerable pressure on one another to live up to the expected codes of conduct.        | 245. Students pay little attention to rules and regulations.   |
| 221. National elections generate a lot of intense campaigning and strong feeling on the campus.              | 246. Old grads are always pleased to discover that few things have changed.  |
| 222. Students here can be wildly happy one minute and hopelessly depressed the next.                         | 247. It is hard to prepare for examinations because students seldom know what will be expected of them.  |
| 223. Many lectures are delivered in a monotone with little inflection or emphasis.                           | 248. The campus religious program tends to emphasize the importance of acting on personal conviction, rather than the acceptance of tradition. |
| 224. Public debates are held frequently.   | 249. Student publications never lampoon dignified people or institutions.  |
| 225. The faculty encourage students to think about exciting and unusual careers.                             | 250. People here are always trying to win an argument.   |

**Legend: T — True.** Generally true or characteristic of the college, is something which occurs or might occur, is the way people tend to feel or act.

**F — False.** Generally false or not characteristic of the college, is something which is not likely to occur, is not the way people typically feel or act.

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| 251. There are a number of prominent faculty members who play a significant role in national or local politics.                   | 276. Most students look for variety and novelty in summer jobs.   |
| 252. Students tend to hide their deeper feelings from each other.   | 277. It is easy to take clear notes in most courses.  |
| 253. Class discussions are typically vigorous and intense.  | 278. It is very difficult to get a group decision here without a lot of argument.   |
| 254. The college tries to avoid advertising and publicity.  | 279. A controversial speaker always stirs up a lot of student discussion.   |
| 255. The future goals for most students emphasize job security, family happiness, and good citizenship.                           | 280. The student leaders here have lots of special privileges.  |
| 256. Few students bother with rubbers, hats, or other special protection against the weather.                                     | 281. The expression of strong personal belief or conviction is pretty rare around here.   |
| 257. The library is exceptionally well equipped with journals, periodicals, and books in the social sciences.                     | 282. Very few things here arouse much excitement or feeling.  |
| 258. There are frequent informal social gatherings.   | 283. The professors really push the students' capacities to the limit.  |
| 259. Society orchestras are more popular here than jazz bands or novelty groups.  | 284. Student parties are colorful and lively.   |
| 260. Chapel services on or near the campus are well attended.   | 285. Quite a few faculty members have had varied and unusual careers.   |
| 261. The school has an excellent reputation for academic freedom.   | 286. Rough games and contact sports are an important part of intramural athletics.  |
| 262. Campus buildings are clearly marked by signs and directories.  | 287. In many courses the broad social and historical setting of the material is not discussed.  |
| 263. Students are very serious and purposeful about their work.   | 288. Students frequently do things on the spur of the moment.   |
| 264. Education for leadership is strongly emphasized.   | 289. Students think about dressing appropriately and interestingly for different occasions — classes, social events, sports, and other affairs. |
| 265. Students who are concerned with developing their own personal and private system of values are likely to be regarded as odd. | 290. This school has a reputation for being very friendly.  |
| 266. Introductory science or math courses are often elected by students majoring in other areas.                                  | 291. Many faculty members seem moody and unpredictable.   |
| 267. To most students here art is something to be studied rather than felt.   | 292. Classes meet only at their regularly scheduled time and place.   |
| 268. This college's reputation for marriages is as good as its reputation for education.  | 293. Every year there are carnivals, parades, and other festive events on the campus.   |
| 269. Students are expected to work out the details of their own program in their own way.   | 294. Most students are interested in careers in business, engineering, management, and other practical affairs.                                 |
| 270. Most of the professors are very thorough teachers and really probe into the fundamentals of their subjects.                  | 295. There is considerable interest in the analysis of value systems, and the relativity of societies and ethics.                               |
| 271. There is a lot of apple-polishing around here.   | 296. There is a lot of interest in the philosophy and methods of science.   |
| 272. Most courses are a real intellectual challenge.  | 297. Concerts and art exhibits always draw big crowds of students.  |
| 273. Students have little or no personal privacy.   | 298. Nearly everyone here has a date for the weekends.  |
| 274. The professors really talk <i>with</i> the students, not just <i>at</i> them.  | 299. Counseling and guidance services are really personal, patient, and extensive.  |
| 275. Students ask permission before deviating from common policies or practices.  | 300. Careful reasoning and clear logic are valued most highly in grading student papers, reports, or discussions.                               |

APPENDIX B

PRESS SCALE DEFINITIONS (CCI)

## PRESS SCALE DEFINITIONS (CCI)

The Thirty Variables are Listed Alphabetically Below

1. Abasement -- Assurance: self-depreciation versus self confidence.
2. Achievement: striving for success through personal effort.
3. Adaptability -- Defensiveness: accdptance of criticism versus resistance to suggestion.
4. Affiliation -- Rejection: friendliness versus unfriendliness.
5. Aggression -- Blame Avoidance: hostility versus its inhibition.
6. Change -- Sameness: flexibility versus routine.
7. Conjunctivity -- Disjunctivity: planfulness versus disorganization.
8. Counteraction -- Inferiority Avoidance: restriving after failure versus withdrawal.
9. Deference -- Restiveness: respect for authority versus rebelliousness.
10. Dominance -- Tolerance: ascendancy versus forbearance.
11. Ego Achievement: striving for power through social action.
12. Emotionality -- Placidity: expressiveness versus restraint.
13. Energy -- Passivity: effort versus inertia.
14. Exhibitionism -- Inferiority Avoidance: attention-seeking versus shyness.
15. Fantasied Achievement: daydreams of extraordinary public recognition.
16. Harm Avoidance -- Risktaking: fearfulness versus thrill-seeking.
17. Humanities, Social Science: interests in the Humanities and the Social Sciences.
18. Impulsiveness -- Deliberation: impetuousness versus reflection.
19. Narcissism: vanity
20. Nurturance -- Rejection: helping others versus indifference.

21. Objectivity -- Projectivity: detachment versus superstition or suspicion.
22. Order -- Disorder: compulsive organization of details versus carelessness.
23. Play -- Work: pleasure-seeking versus purposefulness.
24. Practicalness -- Impracticalness: interest in practical activities versus indifference.
25. Reflectiveness: introspective contemplation.
26. Science: interests in the Natural Sciences.
27. Sensuality -- Puritanism: interest in sensory and esthetic experiences.
28. Sexuality -- Prudishness: heterosexual interests versus their inhibition.
29. Supplication -- Autonomy: dependency versus self-reliance.
30. Understanding: intellectuality.

APPENDIX C

ENVIRONMENTAL FACTORS AND SCALES (CCI)



## ENVIRONMENT FACTORS AND SCALES (CCI)

## Intellectual Climate

Factor and Press Scale	Score	Sum	Norm*
<b>1. Aspiration Level:</b>			
No. 8. Counteraction	10		5.3
6. Change	10		6.4
15. Fantasied Achievement	10		6.6
30. Understanding	<u>10</u>		<u>6.6</u>
Totals	40		22.9
<b>2. Intellectual Climate:</b>			
No. 25. Reflectiveness	10		6.0
17. Humanities-Social Science	10		6.2
27. Sensuality	10		4.9
30. Understanding	10		6.6
15. Fantasied Achievement	<u>10</u>		<u>4.7</u>
Totals	50		27.9
<b>3. Student Dignity:</b>			
No. 21. Objectivity	10		7.4
1. Assurance	(10-Abasement)		7.0
10. Tolerance	(10-Dominance)		<u>5.4</u>
Totals	30		19.7
<b>4. Academic Climate:</b>			
No. 17. Humanities-Social Science	10		6.2
26. Science	<u>10</u>		<u>6.2</u>
Totals	20		12.4
<b>5. Academic Achievement:</b>			
No. 2. Achievement	10		6.2
13. Energy	10		5.8
30. Understanding	10		6.6
8. Counteraction	10		5.3
7. Conjunctivity	<u>10</u>		<u>7.1</u>
Totals	50		30.9
<b>6. Self-Expression:</b>			
No. 11. Ego Achievement	10		5.7
12. Emotionality	10		6.2
14. Exhibitionism	10		5.5
13. Energy	<u>10</u>		<u>5.8</u>
Totals	40		23.2

## Non-Intellectual Climate

Factor and Press Scale	Score Sum	Norm*
7. Group Life:		
No. 4. Affiliation	10	7.0
29. Supplication	10	6.2
20. Nurturance	10	5.8
3. Adaptability	<u>10</u>	<u>4.6</u>
Totals	40	23.6
8. Academic Organization:		
No. 5. Blame Avoidance <sup>eq</sup>	(10-Aggression)	5.9
22. Order	10	6.5
7. Conjunctivity	10	7.1
18. Deliberation	(10-Impulsiveness)	4.4
9. Deference	10	4.9
19. Narcissism	<u>10</u>	<u>5.0</u>
Totals	50	33.9
9. Social Form:		
No. 19. Narcissism	10	5.0
20. Nurturance	10	5.8
3. Adaptability	10	4.6
10. Dominance	10	4.6
23. Play	<u>10</u>	<u>5.3</u>
Totals	50	25.1
10. Play-Work:		
No. 28. Sexuality	10	5.9
16. Risktaking	(10-Harm Avoidance)	4.3
23. Play	10	5.3
18. Impulsiveness	<u>10</u>	<u>5.6</u>
Totals	40	21.2
11. Vocational Climate:		
No. 24. Practicalness	10	5.3
27. Puritanism	(10-Sensuality)	5.1
9. Deference	10	4.9
22. Order	10	6.5
3. Adaptiveness	<u>10</u>	<u>4.6</u>
Totals	50	26.5

\*Based upon 1933 juniors and seniors enrolled in 32 colleges (From Stern's Scoring Booklet).

APPENDIX D

COLLEGE CHARACTERISTICS INDEX NORMS

COLLEGE CHARACTERISTICS INDEX NORMS  
(n=1993)

Scales	$\bar{X}$	Norm $\sigma$	Raw Score (RS) to Standard Score (SS) <sup>a</sup>										
			0	1	2	3	4	5	6	7	8	9	10
1. Aba-Ass	3.1249	2.0797	-3.0	-2.0	-1.1	-0.1	0.8	1.8	2.8	3.7	4.7	5.6	6.6
2. Ach	6.1851	2.6440	-4.7	-3.9	-3.2	-2.4	-1.7	-0.9	-0.1	0.6	1.4	2.1	2.9
3. Ada-Dfs	4.6412	1.9530	-4.7	-3.7	-2.7	-1.7	-0.7	0.4	1.4	2.4	3.4	4.5	5.5
4. Aff	6.8791	1.9201	-7.2	-6.1	-5.1	-4.0	-3.0	-2.0	-0.9	0.1	1.2	2.2	3.3
5. Agg-Bla	4.1154	2.2484	-3.7	-2.8	-1.9	-1.0	-0.1	0.8	1.7	2.6	3.5	4.3	5.2
6. Cha-Sam	6.5364	1.9396	-6.7	-5.7	-4.7	-3.6	-2.6	-1.6	-0.6	0.5	1.5	2.5	3.6
7. Cnj-Dsj	7.0582	2.2702	-6.2	-5.3	-4.5	-3.6	-2.7	-1.8	-0.9	-0.1	0.8	1.7	2.6
8. Ctr	5.1450	1.8232	-5.6	-4.5	-3.4	-2.4	-1.3	-0.2	0.9	2.0	3.1	4.2	5.3
9. Dfr-Rst	4.9423	2.0203	-4.9	-3.9	-2.9	-1.9	-0.9	0.1	1.0	2.0	3.0	4.0	5.0
10. Dom-Tol	4.6794	1.9988	-4.7	-3.7	-2.7	-1.7	-0.7	0.3	1.3	2.3	3.3	4.3	5.3
11. E/A	5.7316	2.0263	-5.7	-4.7	-3.7	-2.7	-1.7	-0.7	0.3	1.3	2.2	3.2	4.2
12. Emo-Pic	6.1305	1.9417	-6.3	-5.3	-4.3	-3.2	-2.2	-1.2	-0.1	0.9	1.9	3.0	4.0
13. Eny-Pas	5.6533	2.2766	-5.0	-4.1	-3.2	-2.3	-1.5	-0.6	0.3	1.2	2.1	2.9	3.8
14. Exh-Inf	5.5901	1.9867	-5.6	-4.6	-3.6	-2.6	-1.6	-0.6	0.4	1.4	2.4	3.4	4.4
15. F/A	4.7260	1.7473	-5.4	-4.3	-3.1	-2.0	-0.8	0.3	1.5	2.6	3.7	4.9	6.0
16. Har-Rsk	5.4626	2.1070	-5.2	-4.2	-3.3	-2.3	-1.4	-0.4	0.5	1.5	2.4	3.4	4.3
17. Hum	6.1380	2.4158	-5.1	-4.3	-3.4	-2.6	-1.8	-0.9	-0.1	0.7	1.5	2.4	3.2
18. Imp-Del	5.6488	1.8488	-6.1	-5.0	-3.9	-2.9	-1.8	-0.7	0.4	1.5	2.5	3.6	4.7
19. Nar	5.0933	2.3230	-4.4	-3.5	-2.7	-1.8	-0.9	-0.1	0.8	1.6	2.5	3.4	4.2
20. Nur	5.6779	2.1763	-5.2	-4.3	-3.4	-2.5	-1.5	-0.6	0.3	1.2	2.1	3.1	4.0
21. Obj-Pro	7.2810	2.1216	-6.9	-5.9	-5.0	-4.0	-3.1	-2.2	-1.2	-0.3	0.7	1.6	2.6
22. Ord-Dso	6.5289	1.8385	-7.1	-6.0	-4.9	-3.8	-2.8	-1.7	-0.6	0.5	1.6	2.7	3.8
23. Ply-Wrk	5.4185	2.3507	-4.6	-3.8	-2.9	-2.1	-1.2	-0.4	0.5	1.3	2.2	3.0	3.9
24. Pra-Ipr	5.2745	2.1526	-4.9	-4.0	-3.0	-2.1	-1.2	-0.3	0.7	1.6	2.5	3.5	4.4
25. Ref	5.8705	2.4236	-4.8	-4.0	-3.2	-2.4	-1.5	-0.7	0.1	0.9	1.8	2.6	3.4
26. Sci	6.3066	2.3516	-5.4	-4.5	-3.7	-2.8	-2.0	-1.1	-0.3	0.6	1.4	2.3	3.1
27. Sen-Pur	4.6834	2.5023	-3.7	-2.9	-2.1	-1.3	-0.5	0.3	1.1	1.9	2.7	3.5	4.2
28. Sex-Pru	6.1199	2.1502	-5.7	-4.8	-3.8	-2.9	-2.0	-1.0	-0.1	0.8	1.7	2.7	3.6
29. Sup-Aut	6.0803	1.7671	-6.9	-5.7	-4.6	-3.5	-2.4	-1.2	-0.1	1.0	2.2	3.3	4.4
30. Und	6.4310	2.2562	-5.7	-4.8	-3.9	-3.0	-2.2	-1.3	-0.4	0.5	1.4	2.3	3.2

Factors	Norms		Raw Score (RS) to Standard Score (SS) <sup>a</sup>										
	X	0	0	5	10	15	20	25	30	35	40	45	50
1. Aspiration Level	22.8384	5.6800	-8.0	-6.3	-4.5	-2.8	-1.0	0.8	2.5	4.3	6.0	7.8	9.6
2. Intellectual Climate	27.8490	9.2510	-6.0	-4.9	-3.9	-2.8	-1.7	-0.6	0.5	1.5	2.6	3.7	4.8
3. Student Dignity	19.4767	4.9367	-7.9	-5.9	-3.8	-1.8	0.2	2.2	4.3	6.3	8.3	10.3	12.4
4. Academic Climate	12.4446	4.1760	-6.0	-3.6	-1.2	1.2	3.6	6.0	8.4	10.8	13.2	15.6	18.0
5. Academic Achievement	30.4726	8.3818	-7.3	-6.1	-4.9	-3.7	-2.5	-1.3	-0.1	1.1	2.3	3.5	4.7
6. Self-Expression	23.1054	6.1037	-7.6	-5.9	-4.3	-2.7	-1.0	0.6	2.3	3.9	5.5	7.2	8.8
7. Group Life	23.2785	5.6941	-8.2	-6.4	-4.7	-2.9	-1.2	0.6	2.4	4.1	5.9	7.6	9.4
8. Academic Organization	33.8585	7.7665	-8.7	-7.4	-6.1	-4.9	-3.6	-2.3	-1.0	0.3	1.6	2.9	4.2
9. Social Form	25.5103	7.4670	-6.8	-5.5	-4.2	-2.8	-1.5	-0.1	1.2	2.5	3.9	5.2	6.6
10. Play-Work	21.7245	6.1382	-7.1	-5.4	-3.8	-2.2	-0.6	1.1	2.7	4.3	6.0	7.6	9.2
11. Vocational Climate	26.7035	7.4430	-7.2	-5.8	-4.5	-3.1	-1.8	-0.5	-0.9	2.2	3.6	4.9	6.3
<b>Areas</b>	<b>X</b>	<b>0</b>	<b>30</b>	<b>60</b>	<b>90</b>	<b>120</b>	<b>150</b>	<b>180</b>	<b>210</b>	<b>240</b>	<b>270</b>	<b>300</b>	<b>330</b>
1. Intellectual Climate	177.7587	38.7386	-7.6	-6.1	-4.5	-3.0	-1.4	0.1	1.7	3.2	4.8	6.3	7.9
2. Non-intellectual Climate	154.1806	27.1491	-9.1	-6.9	-4.7	-2.5	-0.3	1.9	4.1	6.3	8.5	10.7	13.0
3. Impulse Control	52.1340	10.5404	-4.2	1.5	7.2	12.9	18.6	24.3	30.0	35.6	41.3	47.0	52.7

a)  $\bar{X}_{SS} = 0$ ,  $\sigma_{SS} = 2$ ;  $SS = \frac{2(RS - \text{Norm } \bar{X})}{\text{Norm } \sigma}$

APPENDIX E

INNOVATIVE COURSE OUTLINE

The initial concern of the FCCIT program was the implementation of the following program courses:

- A. Ideas and Their Expression (Traditionally English)
  - 1. Choice and Temptation
  - 2. Responsibility
  - 3. Love
  - 4. Power
  - 5. Self and Alienation
- B. Social Institutions: Their Nature and Change (Social Science)
  - 1. The Basis of Community and Society
  - 2. The Structure of Community Control
  - 3. The Black Experience
- C. Quantitative and Analytical Thinking (Mathematics)
  - 1. Experimental Mathematics
  - 2. Tools and Concepts
  - 3. Functions
  - 4. Similarity and Trigonometry
  - 5. Consumer Mathematics
  - 6. Sets and Logic
  - 7. Computer Science
  - 8. The Real Number System
  - 9. Probability and Statistics
- D. Biology (Natural Science)
  - 1. Nature of Science
  - 2. Evaluation
  - 3. The Cell
  - 4. Metabolism and Regulatory Mechanism
  - 5. Reproduction, Growth and Development

6. Nature of Living Things
  7. Genetics
  8. Ecology
- E. Physical Science (same)
1. Nature of Science
  2. The Principle of Conservation Laws
  3. Gas Laws and Kinetic Theory
  4. Light
  5. Chemistry
- F. Humanities
1. Man - His Creative Awareness
- G. Philosophy
1. Philosophical Inquiry
  2. African World View
  3. Philosophy of Religion
  4. Social and Political Philosophy
  5. Epistemology



VITA<sup>2</sup>

Raymond E. Parker

Candidate for the Degree of

Doctor of Education

Thesis: A COMPARATIVE STUDY OF ACADEMIC ACHIEVEMENT AND ENVIRONMENTAL PRESS OF STUDENTS IN AN INNOVATIVE AND A TRADITIONAL PROGRAM AT A PREDOMINANTLY BLACK COLLEGE

Major Field: Higher Education

Biographical:

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