

AN EXPERIMENTAL INVESTIGATION OF THE
RELATIONSHIP BETWEEN ENVIRONMENTAL
INTERVENTION AND SELECTIVE
CRITERIA ASSOCIATED WITH
ACADEMIC ACHIEVEMENT

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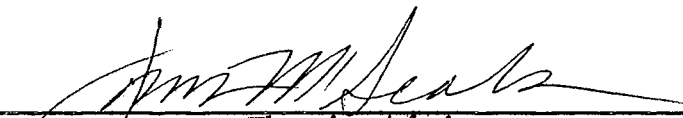
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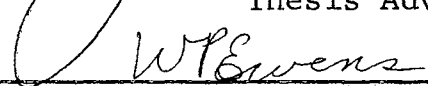
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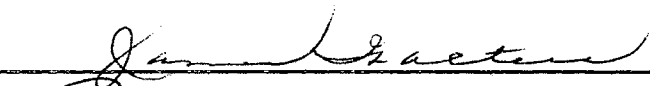
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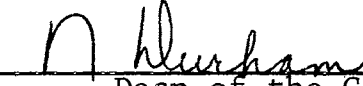


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CHAPTER I

INTRODUCTION

Grafton (42) indicated that although it has been only within the past two decades that research on the college student has been considered as worthwhile research by behavioral scientists, interest on viewing the college student as a whole person began at the turn of the century. For example, in 1899, William Rainey Harper (43), President of the University of Chicago, in an address at Brown University predicted that "the scientific study of the student" would eventually be made an integral part of the American University. A review of the literature pertaining to the American college student reveals the accuracy of Harper's prediction.

In 1916, the first course in student personnel services was taught as a course for college credit and by the 1930's most colleges and universities employed student personnel workers to assist the student in adjusting to his academic environment (19). William H. Cowley in 1935 indicated that in the early thirties, student personnel workers believed that the age of most college students was a crucial stage of adolescence which involved significant physiological and psychological changes. Cowley continued by stating "...[life

was] never more intensely felt nor more furiously lived than by the girl or boy between eighteen and twenty-two (23, p. 42).

This belief had major implications for the responsibility of the college to the student. It was believed that "once a college has admitted a student, it had a moral obligation to do everything within reason to help him succeed" (24, p. 47). College Presidents such as E. H. Wilkens of Oberlin and Lotus D. Coffman of Minnesota advocated that colleges exist for the sake of the student, not just for special subjects of instruction, and above all, college personnel would not knowingly allow students to fall by the wayside (19).

Although the concern for the student's total personality development and the concern for the student's adjustment to his environment has existed for several decades, relatively few programs have been specifically designed to facilitate the optimal growth of each student within the context of his environment. However, the interest in the student's optimal development appears to be a growing concern for educators. The report of The Committee on the Student in Higher Education (88) speaks to this concern when it states that:

The quality of relationships in higher education... must be improved not simply because it will enable students to spend happy and more fulfilling years in college or because many of the present conditions in higher education are intolerable, but primarily because unless trends toward gigantism and dehumanization are reversed, the college will not be able to educate even the technician. The argument for developmental education is, in the last analysis, that even technicians cannot be trained unless it

is recognized that they are something more than functionaries--that they are also human beings, and as such they can perform effectively only when their basic emotional needs are fulfilled. Everyone wants a face, not a mask. (p. 58)

In an attempt to analyze the effects of individual-environment compatibility, Pervin (71) collected data from over twenty colleges throughout the country. The instrument used was the Transactional Analysis of Personality and Environment (TAPE). One of his findings was concerned with students who saw their values, goals, and objectives as being out of harmony with the college environment, or parts of the college environment, tended to be dissatisfied with their college and begin to think of dropping out. He suggests that we need to pay more attention to the interaction between the individual and his college environment. The present research accepts the position that a positive interaction with the college environment creates a more favorable condition for learning to take place than does a negative interaction.

Statement of the Problem

The investigation in question, building upon past research represents an attempt to provide visible data concerning the interaction of first-semester freshman students with the environment in which they live. The problem under investigation in the proposed study could be stated as follows: What effect does a systematic and carefully designed program of assistance in environmental interaction produce

when applied to first-semester freshman students at Oklahoma State University? More specifically, the study will attempt to measure four factors concerned with the students' college adjustment as a result of specific treatments. These factors are academic success, academic motivation, attrition rate, perceptions of environmental stimuli of the college living-learning environment.

Significance of the Study

The present research represents an attempt to establish a cause and effect relationship between the independent variable of environmental intervention and the dependent variables, attrition, academic success, academic motivation, and perception of environmental stimuli.

This investigation will be concerned with resident freshmen students at Oklahoma State University. Under these circumstances, any information gathered will provide data that will be useful in making recommendations regarding changes or modifications of existing internal structures at the university. For example, the results from the present investigation could provide relevant information for decision making in: defining the role and functions of the residence hall staff, determining functions and responsibilities of the Division of Student Affairs, determining functions and responsibilities of the Student Personnel Departments of the various colleges within the total university, and determining functions and responsibilities of the university

administration and faculty concerned with undergraduate education and student development.

The study may also serve as a basis for future research concerned with academic success variables of freshmen students. Also, while research findings should be interpreted with care when applied to other freshmen college environments, the present investigation could provide a structure for viewing interaction at other institutions of higher learning.

Assumptions

The orientation of the treatment group in the present investigation will focus on the following assumptions:

1. Students can better utilize their time and energy when they are able to make more explicit their objectives (reasons and purposes for attending college).
2. Students are positively influenced when they actively participate and have satisfying experiences in student activities.
3. Both intellectual and social skills are facilitated when the student's place of residence offers opportunities for meaningful interchange and opportunities for shared intellectual interest.
4. Students are positively influenced when they have frequent and friendly interaction with the faculty and administration.

Two additional assumptions of the study are:

1. The fall academic semester time span of the study will be sufficient to allow for impact.
2. Any extraneous variables will be adequately controlled through randomization.

Theoretical Orientation

The present investigation was concerned with the interaction between the individual student and selected variables within his college environment. Previous research has suggested that the college environment does have an impact on changing attitudes and values on college students. The work by Chickering (22), Webster, Freedman, Heist (95), Freedman (34), Sanford (77), Feldman and Newcomb (33), Robinson (75), Lehmann, Sinha, and Hartnett (51), and Pace (70) attest to this conviction.

The above studies have suggested that impact increases as students make more explicit their objectives for attending college. Clear goals and purposes are the beginning point for decision making. Chickering (22) spoke on the issue of the importance of clarifying purposes when he stated that for many college students, the dilemma is not just "Who am I?" but "Who am I going to be?" The question is not "Where am I?" but "Where am I going?" Development of purpose occurs when these questions are answered with increasing clarity and conviction (22, p. 44).

Allport (1) stated that the core of the identity problem for the adolescent is resolved through the selection of an

occupation or other life goal. The adolescent knows that the future must follow a plan, and his development of a sense of purpose and the establishment of long-range goals add a new dimension to his sense of selfhood.

Institutional size also has implication for environmental interaction. Chickering (22) reported on a law that Taylor (85) postulated, which states that "people tend to disappear when huddled together in large numbers." Chickering (22) hypothesized that as the number of persons increases in relation to a given setting six things occur: (1) a smaller proportion of the people participate, (2) participation becomes less varied and more specialized, (3) only the more talented actively participate, (4) evaluation consists of comparing people with each other, rather than according to how well a person's abilities fit the requirements of a given task, (5) hierarchy of prestige and power develops, and (6) rules and regulations become formalized and rigid.

The study by Barker and Gump (13) supported Chickering's hypothesis. Their study indicated that the number of persons increased much faster than either the number of settings or the varieties of settings as the schools increased in size. In the smaller school, there was about two settings for each person while in the largest there were more than four persons for each setting. A similar negative ratio was found when comparing varieties of settings in large and small schools. Additional findings include: (1) students in small schools held an average of 3.5 responsible positions

and (2) more students in small schools reported being in challenging and important activities than did students in large schools.

A student's place of residence also has an impact on his development. Snead and Caple (82) completed a study on the effect of academic achievement of congruent groupings of male and female students by categories of academic majors. The purpose of their study was to examine what happens academically when certain kinds of students are placed into certain kinds of environments. They reported that when like students (students with similar academic and social interest) live together there was a positive environmental effect on their academic achievement. The findings did, however, indicate that the grouping had more of an impact on the realistic males than it did on the social females. Dressel and Lehmann (27) in a study completed at Michigan State University reports that students believed that the most significant experience in their lives was their association with the different personalities in their living units. The discussions and bull sessions were potent factors in establishing their attitudes and values.

In a self-reporting study by DeCoster (26) at the University of Florida, high-ability students were assigned to residence halls such that these students formed 50 percent of the halls population. When compared with a control group, these high-ability students had better academic success, and perceived their living units as more desirable. They also

more frequently reported that their living units were more conducive to study, that the informal bull sessions had educational value, that they were influenced by their fellow residents to do better in their studies, and that their fellow residents were considerate and respectful of others.

The interaction between the student and the faculty and administration is believed to play a significant role in student's development. For example, it is the opinion of the educators who wrote The Committee on the Student in Higher Education (89) that the college should assume more conscious responsibility for the human development of its students. The committee stated that:

A student is not a passive digester of knowledge elegantly arranged for him by superior artists of curriculum design. He listens, reads, thinks, studies, and writes at the same time that he feels, worries, hopes, loves, and hates. He engages in all these activities not as an isolated individual but as a member of overlapping communities which greatly influence his reactions to the classroom experience. To teach the subject matter and ignore the realities of the student's life and the social systems of the college is hopelessly naive (p. 6).

In addition, Kerr (50) proposed several problems of the university yet to be faced. One of those problems is: "How to establish a range of contact between faculty and students broader than the one-way route across the lecturn or through the television screen" (47, p. 118). Grafton (42), reporting on a note of warning by Morris Keeton proposed that:

To design a college with only courses in mind overlooks the most influential forces available. Peer influences, direct experience of environment, responsible participation in college affairs, and the influence of teachers upon their students in

non-course relations all have an impact on the student's development (42, p. 189).

It must be remembered, however, that students differ in their needs and thus one method of teaching or one set curriculum or one inflexible program will be inadequate in meeting all student needs. Research completed by Siegel and Siegel (78) emphasizes this point when they reported that high ability students benefit from personal contact with the instructor when the contact involves exploration, but the low ability student benefits in his contact with the instructor when the contact involves clarification.

Definition of Terms

The terms used throughout this study will refer to the following meanings:

- (1) Academic Success: The achievement of the student as measured by the first semester GPA.
- (2) Attrition: Those first-semester entering freshman students who do not complete registration for the second semester at Oklahoma State University.
- (3) Experimental Group: 32 first-semester freshman volunteer students will be randomly assigned to an experimental group. Sixteen of the total 32 students will be female and 16 will be male.
- (4) Control Group: 32 first-semester freshman volunteering students will be randomly assigned to a control group. Sixteen of the total 32 students will be female and 16 will be male.

(5) Environmental Facilitator: An advanced graduate student studying in the field of Student Personnel and Guidance, whose function is to assist the experimental subjects in their environmental interactions.

(6) Academic Motivation: The segment of a student's personality which influences his tendency to think and feel like either students who receive high grades or students who receive low grades as measured by the Achiever Personality Scale of the Opinion, Attitude, and Interest Survey (OAIS).

(7) Perceived Environmental Stimuli: Any behavior, event, or other observable characteristic of the institution capable of changing the student's sensory input and as measured by the Inventory of College Activities (ICA).

Limitations of the Study

Even though the strongest possible research design was utilized in the present research, any application of the conclusions drawn from this study to other populations should be interpreted with care. Strict interpretation of the results should be limited to first-semester freshman students who reside in the residence halls at Oklahoma State University. Furthermore, interpretation of the results should be limited to the dependent variables in the present investigation which include: grade-point averages received by subjects at the end of the first semester, scores received on the Achiever Personality Scale of the Opinion, Attitude, and Interest Survey and the Inventory of College Activities.

Hypotheses

Hypothesis 1. There are no significant differences between the experimental group and control group in academic success at the end of one semester as measured by their GPA.

Hypothesis 2. There are no significant differences in academic success between the experimental female subjects and the control female subjects as measured by GPA.

Hypothesis 3. There are no significant differences in academic success between the experimental male subjects and the control male subjects as measured by GPA.

Hypothesis 4. There are no significant differences in attrition between the control group and the experimental group.

Hypothesis 5. There are no significant differences in attrition between the experimental female subjects and the control female subjects.

Hypothesis 6. There are no significant differences in attrition between the experimental male subjects and the control male subjects.

Hypotheses 7, 8, and 9 deal with the following thirty-three (33) dimensions and five broad categories of environmental stimuli as measured by the Inventory of College Activities (ICA).

Dimensions

1. Competitiveness vs. Cooperativeness
2. Organized Dating

3. Independence
4. Cohesiveness
5. Informal Dating
6. Femininity
7. Drinking vs. Religiousness
8. Musical and Artistic Activity
9. Leisure Time
10. Career Indecision
11. Regularity of Sleeping Habits
12. Use of the Library
13. Conflict with Regulations
14. Student Employment
15. Use of Automobiles
16. Involvement in the Class
17. Verbal Aggressiveness
18. Extraversion of the Instructor
19. Familiarity with the Instructor
20. Organization in the Classroom
21. Severity of Grading
22. Severity of Administrative Policy
23. Severity of Administrative Policy Against Aggression
24. Severity of Administrative Policy Against Heterosexual Activity
25. Severity of Administrative Policy Against Cheating
26. Academic Competitiveness
27. Concern for the Individual Student
28. School Spirit
29. Permissiveness

30. Snobbishness
31. Emphasis on Athletics
32. Flexibility of the Curriculum
33. Emphasis on Social Life

Broad Categories

1. The Peer Environment-Interpersonal Behavior
2. The Peer Environment-Noninterpersonal Behavior
3. The Classroom Environment
4. The Administrative Environment
5. The College Image

Hypothesis 7. There are no significant differences in perceived environmental stimuli between the control group and the experimental group as measured by the ICA.

Hypothesis 8. There are no significant differences in perceived environmental stimuli between the experimental female subjects and the control female subjects as measured by the ICA.

Hypothesis 9. There are no significant differences in perceived environmental stimuli between the experimental male subjects and the control male subjects as measured by the ICA.

Hypothesis 10. There are no significant differences in academic motivation between the experimental group and control group as measured by the Achiever Personality Scale of the Opinion, Attitude and Interest Survey.

Hypothesis 11. There are no significant differences in academic motivation between the experimental male subjects and the control male subjects as measured by the AP scale of the OAIS.

Hypothesis 12. There are no significant differences in academic motivation between the experimental female subjects and the control female subjects as measured by the AP scale of the OAIS.

Remainder of the Report

Chapter II will contain review of the literature which will include studies related to environmental impact, development, and use of instruments designed to assess the college environment and studies completed in an effort to intervene or manipulate the college environment. Chapter III will present the methodology employed in conducting the experimental investigation. An analysis of data and presentation of results is exhibited in Chapter IV. Summary, conclusions, and recommendations are presented in Chapter V.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

In recent years it has become increasingly evident that the environment acts as a powerful force as it affects man's behavior. Skinner (44) hypothesized that each human being is a unique bundle of behaviors determined by his environment; only that, and nothing more. Environmental conditioning shapes each man and if you would control or change human behavior, you need only control the environment.

Furthermore, he states that if it were not for the unwarranted belief that all control is wrong, we should deal with non-social environment. Perhaps the greatest achievement of physical and biological technology has been the freeing of man from such aversive stimulation as shortages of food, exhausting labor, extremes of temperatures, disease, and so on. But man has not been freed from his social environment; we have simply made the control exercised by the environment less aversive. In order to make the social environment as free as possible of aversive stimuli, we do not need to destroy that environment or escape from it, we need to redesign it (80).

Berenson (14), an architect by training, supports Skinner when he indicates that behavior may be modified through the manipulation of the environment. And if it is the objective of the educator to make the most of his educational environment, then it should be recognized that the environment may be doing things that either distract from, or add to the potential of the teacher and the educational process.

Since the purpose of this study is to investigate the relationship between environmental intervention and selective criteria associated with academic achievement it seems appropriate to include in the review of the literature information concerning areas of: (1) the impact of the college environment, (2) the development and utilization of instruments designed to measure college environments, and (3) studies completed in an effort to control, manipulate or redesign the college environment. The latter area includes studies on environmental assessments and previous investigations related to environmental change.

The Impact of the College Environment

Philip Jacob (46) in 1957, launched a controversy regarding the impact of the college experience on the student. After systematically reviewing data from unrelated research projects, his interpretation of the impact of the college experience is as follows: (1) the impetus for students to change does not come from the formal educational process, (2) students are self-centered and value the

material aspects of life, and (3) the college experience produces no great changes in liberalizing values, but does increase homogeneity and greater consistency of values.

The findings of the Jacob Report were not well received by educators and consequently much research was generated. The resulting research was an effort to refute Jacob's findings and to further define the impact of the college experience on students (27) (33) (40).

The Impact of College on Students by Feldman and Newcomb (33) includes a comprehensive review of the literature and reports very different conclusions.

They reported that some changes that are characteristics of nearly all American college students have emerged. The most prominent changes include: increase in openmindedness, decreasing conservatism in regard to public issues, and increasing sensitivity to aesthetic and "inner" experiences. In addition, many studies indicate a decline in commitment to religion, an increase in intellectual interest and capacities, and an increase in independence, dominance, confidence, and readiness to express impulses.

Freedman's (35) longitudinal study at Vassar College concludes that there are personality changes that occur between the freshman and senior years at college. He indicates that seniors tend to be more mature, less feminine, less authoritarian, more tolerant, more liberal in their religious orientation, and more accepting of intellectual values. The research completed by Webster, Freedman and

Hiest (95) offers support to Freedman's findings by concluding that seniors tend to be more liberal and sophisticated in their political, social, and religious beliefs than are entering freshmen.

Dressel and Lehmann (27) in their efforts to determine the effects of the college experience on students chose a sample of 3,000 freshmen at three small liberal arts colleges. A battery of 13 tests and interviews were used to collect the data. The results of their study indicate that the following changes occur between the freshman and senior years: improvement in critical thinking ability, lessening of stereotypic behavior, lessening of traditional-value orientation, more flexible and less authoritarian, more receptive of people of different races and more aware of their goals. They also indicated that the students believed that their association with different personalities in their living units was the most significant experience in their collegiate lives.

The campus climate being an integral segment of the total environment contributes significantly to the formation of attitudes and values of college students. This concept is explored in the works of Eddy (29), (30) and Brown and Bystryn (18). Eddy (30) suggested that the best way to transmit values is to create an atmosphere on the campus. In making this determination he interviewed faculty, administrators, and students at twenty colleges and universities and found that the development of character is highly

correlated with experiences outside the classroom. He also found that environmental factors such as dominant attitudes, activities outside the classroom, and morals can either negate or reinforce that which the college personnel attempts to advance.

Brown and Bystry's (18) study in 1956 provides insight into the question of whether the differences in students of different colleges are due to the concept that like students tend to attend like colleges or due in part to the impact of the differing environments. The results of their study would support the hypothesis that differential environments of different colleges play a major role in increasing the initial differences of student bodies.

Changes in attitudes, values, interests, and beliefs of college students is due to a combination of environmental influences rather than from any one factor (56), (94). The degree to which such changes occur is dependent upon the modifying experiences (81), the degree of environment in interpersonal relationships (47), (56), the personality of the individual (61), the peers' approval of new attitudes and behaviors (76), and the student expectations (20), (48).

Therefore, because of the host of studies which conclude that change does occur between the time a student enters college and when he graduates, it is indeed difficult to conclude, as did Jacob (46) that the college experience produces no great changes in student values.

There are valuable research contributions in the area of relating the impact of the environment to academic achievement. Mandel (55) upon a review of the literature in this area concludes that the rate and efficiency of learning depends not only upon basic capacity to learn but also on a variety of experiential and environmental factors. He indicated that even though a student may have the capacity to learn, he may be handicapped in the learning process by factors which inhibit or distort his attention, interest, motivation or his values. Antagonism to learning is not uncommon and is often the cause of high attention or a resistance to academic learning.

William Michael and Ernest Boyer (57) in a review of the literature conclude that the campus environment does indeed have an impact on the achievement level of college and university students. McConnell and Heist hypothesized that "the efficacy of a college is the product of the fortunate conjunction of student characteristics and expectations and the demands, sanctions, and opportunities of the college environment and its subcultures" (55, p. 250).

Brown (17) from his study in 1962 concluded that different types of students will perform differently according to the different kinds of college environments. Brown (17) as did Pace (64), (66), and Stern (84), (85) argue from a sociopsychological theory that achievement would be facilitated if efforts would be made to either match the individual to a college environment that would maximize the

realization of his potential or to redesign the college environment to meet the different patterns of needs and expectations of different groups of students. Thistlethwaite (90), (92), (93), Astin (3), (5), (6), (9), and Astin and Holland (18) have contributed valuable research which supports the hypothesis that the college environment has a significant impact on student productivity. Each of these research contributions also lends support to Holland's (45) theory of development. His theory hypothesizes that a non-congruent pairing of personality and environment would have delatorious effects on academic achievement.

Charles Elton's study in 1970 was based on Holland's congruency model. He indicated that a more crucial test of the theory that personality type interacts with environment would be in the hypothesis that a student who changes his major should also change in his personality development. While on the other hand, a student who remains in the same major would not change in the same way. Using the Omnibus Personality Inventory (OPI) as the instrument for measuring change, Elton concluded that his study lends support to Holland's assumption that personality type interacts with environment (31).

Posthuma and Navron (73) conducted a study in an effort to determine the relationship of congruence in student-faculty interest to student achievement in college. One hundred and ten first-year students and forty-four faculty members (88% of the total faculty) at Royal Roads Military

College were selected as the sample for this study. The Holland Vocational Preference Inventory, (VPI), the Edwards Personal Preference Schedule (EPPS), and the Strong Vocational Interest Blank (SVIB) were the instruments used to measure interest. The results of the study lend support for the congruency hypothesis.

Instruments to Measure the Environment

Background

There have been developed three different approaches to assessing the college environment--the image approach, the student characteristics approach, and the stimulus approach (8).

Prior to the 1930's, any attempt to assess the college environment was focused on statistical appraisals of plant and personnel (2), (9). However, since the 1930's researchers have become more and more interested in the sociological and psychological forces operating within the environment.

Lewin in 1936 contended that:

Every scientific psychology must take into account whole situations, i.e., the state of both person and environment. This implies that it is necessary to find methods of representing person and environment in common terms as parts of one situation (52, pp. 12-13).

Murray in 1938, developed the need-press model designed to facilitate the understanding of behavior as the result of the interaction between person and environment. He defines needs as follows:

A need is a construct which stands for a force in the brain region, a force which organizes perception, apperception, intellection, conation, and action in such a way as to transform in a certain direction as existing, unsatisfying situations. A need is sometimes provoked directly by internal processes of some kind...but, more frequently by the occurrence of one of a few commonly effective press (59, pp. 123-124).

He defines press as "direction tendency in an object or situation" (59, p. 118).

The Image Approach

Using Murray's need-press theory and Stein and Bloom's (87) work on personality and assessment, Stern and Pace (67) in 1957 developed the College Characteristic Index (CCI). This instrument was the first systematic empirical approach to measuring the college environment. Stern and Pace believed the college to be composed of diverse elements--individual needs and environmental presses. Press is reflected in the stresses, pressures, and rewards levied by the environment. Needs are personal characteristic tendencies which give unity and direction to the individual (67), (68), (69).

The CCI consists of 300 items designed to measure 30 different environmental presses. It is based on the notion that the college environment of "press" can be characterized in terms of its potential for reinforcing personality needs. Thus the 30 different environmental presses each correspond to a parallel personality need. Referring to Murray's 1938 taxonomy model, the CCI items represent an attempt to measure.

the "Beta Press"--the student's image of the college environment (69).

Pace (62) shortened and simplified the CCI scales by factor analysis and item analysis. The results of the analysis was the development of the College and University Environment Scales (CUES). The major purpose of this revision was to identify those CCI items retained for use in the CUES which are a measure of the student's image of the college environment. The CUES identifies five factors of the educational environment. They are practicality, community, awareness, propriety, and scholarship (62).

The Student Characteristics Approach

Astin and Holland (12) devised a somewhat different approach to assessing the college environment. They designed the Environmental Assessment Technique (EAT), which is based on the characteristics of the student body. They argue that the environment is transmitted by people and since the undergraduate's personal contacts are chiefly with fellow students, then accordingly the environment can best be assessed by determining the characteristics of the student body, i.e., average intelligence, student body size, and six personal orientations classified as realistics, intellectual, social, conventional, enterprising, and artistic. Astin and Holland (12) completed a test for validity of the EAT and found that a large segment of the reliable variances in the 30 CCI Scales could be accounted for by the 8 EAT scores. In

another test regarding the validity of the EAT, Astin (7) was able to confirm several specific hypotheses concerning the meaning of the EAT measures.

The Stimulus Approach

The Inventory of College Activities (ICA) developed by Astin is the most recent instrument designed to assess the college environment. In constructing the ICA, the "college environment" is defined to mean anything about the institution that acts as a potential "stimulus" for the student (8). Astin defines a "stimulus" as follows:

Any behavior, event, or other observable characteristic of the institution capable of changing the student's sensory input, the existence or occurrence of which can be confirmed by independent observation (8, p. 1).

The preceding discussion suggests that the data used in the image and student characteristics approaches to assessing the college environment do not meet the criteria used for assessing the environment as outlined for the stimulus approach used by the ICA (8). The goal of the ICA is to identify the environmental stimuli which act as a catalyst or a generator or as a reinforcer in changing the student's sensory input. The ICA identifies four broad categories of stimuli: (1) the peer environment, (2) the classroom environment, (3) the administration environment, and (4) the physical environment (4).

In designing the ICA, Astin (8) took under consideration the existing literature, tests and inventories appropo

to the aforementioned broad categories of stimuli. Two hundred and seventy-five items were assembled from this data. In addition, seventy-five items relating to the college image and forty-eight items concerning the student's personal characteristics were included in the initial study in order to determine the relationships among these three types of data.

Thirty thousand five hundred seventy students from 246 institutions filled out the initial ICA questionnaire in the summer of 1962. All participating students had just completed their freshman year. From the data, several factor analyses were performed in order to reduce the total number of items. This method produced a total of 33 items which are included in the current version of the ICA. Each item or environmental dimension is described in detail in the Manual for the Inventory of College Activities.

Studies on Assessing College Environments

Keith's 1965 study of four hundred and twenty undergraduate students at the University of Alabama attempted to determine the relationship between student's personality needs and the existing environmental presses. Further, the purpose was to analyze the relationship of this congruency to the student's academic performance and to the student's reported personal satisfaction in college. Significant results were not obtained, thus indicating that the degree of satisfaction of the student's personal need system, within the limits of this study is not a significant variable in academic performance (5).

Gallissich's 1967 study was an effort to identify the correlation between academic achievement and certain environmental presses. One hundred and sixty-four freshmen students at the University of Texas were used as the sample. Although he was able to identify some correlations between the environmental press and academic achievement, the correlations were generally small. He found that the best variables related to the standard predictors of academic success, i.e., Scholastic Aptitude Test scores and high school performance (39).

Astin (5) in 1963 completed a study attempting to identify the differential college effects on the student's motivation to seek the Ph.D. degree. Using the EAT instrument, he found that Ph.D. degree aspirations were negatively affected by the size of the student body, the percentage of males in the student body, and the conventional orientation in the college environment.

Thistlewaite (90), (92) in a study on Ph.D. productivity in college environments found that environments which stressed natural sciences, social sciences, arts and humanities produced a high percentage of Ph.D.'s.

Using the CCI as a measuring instrument, Thistlewaite (91) found that 4,200 National Merit Scholars had higher retention rates in environments where there was a strong press for affiliation, achievement, independence, humanism, enthusiasm, and supportiveness.

Lawles Pace (70), in 1967, completed a study attempting to establish the importance of positive relationships and its effect on environmental perception and academic achievement. His sample consisted of 148 roommate pairs and the instruments used were the CUES, the Edwards Personal Preference Schedule and the Nudd Roommate Checklist. He concluded from the results of the Nudd Roommate Checklist that roommates who were highly dissatisfied with the roommate relationship had significantly lower scholastic achievement than roommates who had a positive relationship with their roommate. As measured by the CUES, dissatisfied roommates reported different psychological perceptions than did the satisfied roommates. Those roommates who reported a positive relationship with their roommates rated the college as exhibiting more awareness characteristics and more propriety characteristics as measured by the CUES than did those students who reported dissatisfaction with their roommates.

A number of studies have concentrated on how different student characteristics relate to differing environmental perceptions. MacLean (53) in 1967 studied twelve student living groups. Six of these were selected for their homogenous characteristics. Using the CCI as the measuring instrument, he found that different student living groups perceive the environment differently. The most significant difference was between the men and women's living groups. He concluded that the various sub-cultures of student groups have different perceptions of the environment press.

Bodelson (15) in 1967, utilizing the CUES, attempted to establish the relationship between achievement levels and environmental perceptions. He concluded that perceptions of campus environmental characteristics of freshmen college students are associated with measured achievement and ability levels.

Ducanis (28) in 1962 found significant results when he correlated student involvement with perceptions of student environment. Using four hundred students as his sample and the CUES as his measuring instruments, he found that those students who participated in a greater number of hours of activities on campus had a more positive perception of the college environment than those students who participated in fewer activities. He concluded that participation in the social, cultural, academic and extracurricular activities led students to greater understanding of the functions of the university, identity within the student body, acquaintance with the supportive aspects of the university, increased self-understanding, and interest in scholarship.

Centra's study in 1966, using the CUES, attempted to determine if the major field of study is a significant variable in the student's perception of a larger university. His significant results indicated that the students grouped according to his major saw his major field environment as being higher on the scholarship scale and lower on the propriety scale than they saw the total university environment (21).

Astin (10) in 1964, using two hundred and forty-eight institutions and 127,212 students as his sample, completed a factor analysis of fifty-two student "input" variables. The study revealed six major distinguishing characteristics. They were: Intellectualism, estheticism, status, leadership, masculinity, and pragmatism.

For more indepth research on how student characteristics effect student's perception of the environment Yonger's article (96) Students: Interaction of Student and Environmental Characteristics and Michael and Boyer's article (54) Campus Environment are recommended.

Studies on Environmental Intervention

Few studies have been completed where attempts have been made to intervene or manipulate the college environment. The research in this area that has been attempted has mostly been within the residence halls.

In 1968, Brown (16) designed a study in order to manipulate the environmental press in a college residence hall. He assigned students to residence halls floors so that students with similar academic majors numerically dominated the occupancy. In addition, on two floors a series of eight intellectual discussions were held. The results of the study indicated that the dominance of a vocational group had a significant impact on feelings about college major, degree of satisfaction with college and amount of social interaction.

The enrichment program had a significant effect upon intellectual attitudes and activities.

DeCoster (26) examined the effects of high-ability students being assigned rooms together in residence halls. When compared to a control group, the high-ability students who were grouped together found their living arrangements more conducive to study and the women students had a significantly higher grade-point average. By the students own report, they perceive homogeneously assigned living units as more desirable.

The impact of having roommates taking courses together was studied by Crew and Biblett (25). The hypothesis of the study was that roommates taking at least one course together would earn higher grades than the freshman population due to the factor of proximity and its associated factors among them. The results supporting this hypothesis were significant at .005.

In contrast, Elton and Bates (32) found no significant results when similar vocationally-oriented students were assigned to live in close proximity. They concluded that there is little justification for students to be assigned to rooms on the basis of their enrollment in specific colleges.

Ricker after a review of the literature indicated that "the assignment of students rooms and buildings may be the most significant single educational program conducted through housing" (70, pp. 11-12).

In support of Ricker's statement, Murray (60) concluded that a student's grades are likely to deviate from expectancy, above or below, in the same direction as those of his roommate.

Sorrell (83) found no significant results in grade point, attitudes, or social behavior when comparing those freshmen who were assigned to live with upperclassmen and those freshmen assigned to live with fellow freshmen.

Snead and Caple (82) found contradictory results when determining the effects on academic achievement of congruent grouping of male and female students according to their academic majors. They concluded that "In general...it seems that homogenous groupings of students in residence halls may have some positive affects and is worthy of experimentation" (78, p. 192).

There seems to be a case for college and university student personnel professionals to extend and expand their services. Graff and Cooley (41) compared students who live on campus with commuters and although there was not a significant difference in grade-point averages between the two groups, the commuter students had poorer mental health, poorer curriculum adjustment, and less maturity in determining goals and aspirations. The differences in this study are attributed to the living environment of the student.

The review of the literature conclusively dictates that the college experience does act as an agent for change in the college student, that there are not one, but many

variables in the college environment that acts as that agent, and that the only studies attempting to intervene or manipulate the college environment are related to one facet of the total environment--place of residence.

Summary

Research related to the present investigation was presented as a foundation for an experimental study of environmental interaction. This chapter was concerned with the impact of the college environment on the student, the evaluation of the university environment, and previous research designed to change the environment.

From this review it was apparent that the university environment plays a significant role in shaping the behavior of the student. In addition, the college environment affects the student's productivity in a variety of ways.

While several instruments have been developed to measure the college environment only one seemed appropriate to evaluate environmental stimuli. The ICA was specifically designed to measure certain environmental factors that may serve as a potential stimulus to the student.

An understanding of previous research concerning assessment and changes due to environmental influence served basic to the present study. Earlier studies have established environmental influence as a vital factor in evaluating student success. However, most of those studies were exploratory investigations concerned with reporting demographic

data. A review of the literature supported the need for experimental research designed to produce positive changes in adjustment to campus life.

CHAPTER III

RESEARCH DESIGN

Introduction

Research studies presented earlier have established environmental interaction on the university campus as a legitimate area for scientific investigation. Chapter III includes a description of the procedures used in the present investigation. The selection of the sample is given along with an explanation of the randomization technique employed. A detailed analysis of the instrumentation is described in order to point out the applicability of specific instruments used for measurement purposes in this study. An important part of the research included the development of an experimental counseling program designed to facilitate full participation in the environmental interaction process. Thus, full details of the program will be presented as it was utilized in the study. Step-by-step methodological considerations are also given along with the statistical procedures used in the computation of the data. This chapter will conclude with a summary of the research design.

Subjects

The population for this study consisted of volunteer first-semester freshman students who lived in Willham Hall. The residence hall is a twin-tower co-educational residence hall which houses undergraduate students who are attending Oklahoma State University. Approximately eight hundred of the residing residents are male and seven hundred are female. Out of the total fifteen hundred students, approximately seventy percent are freshman students. The male residents live in the south tower and the female residents live in the north tower. The two towers are separated by a common area which includes a dining hall, snack bar, and recreation area.

An explanation of the proposed program was presented to Willham Hall residents during the first week of the 1971 fall semester. All students who expressed interest in the program were asked to fill out a form indicating their desire to participate. From the group of volunteering female freshman students, sixteen (16) were randomly assigned as experimental subjects and sixteen (16) were randomly assigned as control subjects. The same procedure was followed for volunteering male students so that the final sample consisted of thirty-two (32) males and thirty-two (32) females. The randomization procedure was facilitated by using Popham's (68) table of random numbers.

All subjects were full-time, first-semester entering freshman students and were pre-registered in courses by their assigned advisors at an earlier date. The investigator

did not interfere in any way with the matriculation process utilized at Oklahoma State University.

Instrumentation

The Inventory of College Activities (ICA) was constructed by Astin to measure the perception of the environmental stimuli of the college environment. The ICA was designed for institutional self-study as well as for research on studying the differential impact on student development. The instrument was a self-administered questionnaire which can be completed in 20-25 minutes.

One of the earliest and simplest methods of assessing the environment was the Environmental Assessment Technique (EAT) completed in 1961 by Astin and Holland. Astin (8) computed correlation coefficients between the eight EAT variables and the 33 ICA factors and concluded that the coefficients are consistent with the meanings of the ICA factors.

The correlations of the environmental stimuli factors with the College and University Environment Scale (CUES) scores would indicate that the coefficients are consistent with meanings of the ICA factors. For example, a high degree of community from the CUES scales tends to be associated with cooperativeness (versus competitiveness), cohesiveness, religiousness (versus drinking), and familiarity with the instructor from the ICA scales. Similarly, scholarship from the CUES scales is highly correlated with such factors from

the ICA scale as little leisure time (.66), little use of automobiles (.53), irregular sleeping habits (.68), and little involvement in the classroom (.75).

The squared multiple correlations between the CUES scales and ICA scales indicate that several of the ICA stimulus factors can be estimated with much accuracy from a knowledge of CUES scales scores. At the same time, CUES scores account for less than half of the variance in the majority of the ICA stimulus factors. On the other hand, nearly two-thirds of the variance in the five CUES scales can be accounted for from a knowledge of the ICA stimulus factors (8).

When comparing the CUES scales and the ICA scales, Astin (8) found a considerable amount of overlap between the two sets of image factors. He concluded that the amount of information about the college environment contained in the 24-items comprising the eight ICA image factors may be even greater than the amount of information contained in the five scales derived from the 150-item CUES. He also suggests that subject time and expense could be saved if future studies of college environmental characteristics utilize factorially derived scales based on small number of items.

Product-moment correlations were calculated in order to determine the reliability coefficients of the measures of each of the 33 environmental factors. Astin reports that:

These coefficients show clearly that the split-half reliabilities of the ICA factors are very high: the median corrected reliability coefficient is .931. Eight of the factors produced reliabilities exceeding .950. Only three of the ICA factors (Career Indecision, Verbal Aggressiveness and Extraversion

of the Instructor) yielded reliabilities of less than .850 (8, p. 13).

Since this study involved the purposeful intervention into the students environment the Inventory of College Activities (ICA) was used. The ICA purports to measure the impact of environmental stimuli for five broad categories of the college environment. These five broad categories are:

- (1) Peer Environment--Interpersonal Behavior (dimensions 1-5);
- (2) Peer Environment--Non-Interpersonal Behavior (dimensions 6-15);
- (3) Classroom Environment (dimensions 16-21);
- (4) Administrative Environment (dimensions 22-25); and
- (5) College Image (dimensions 26-33).

Computer analysis of the ICA responses yields scores on thirty-three dimensions within the five overall prime categories mentioned above. Specific numerical values for the thirty-three dimensions are obtained by summing a constant score for each of the ICA statements with a weighted score derived by marking one of several response options offered for each statement. The weighted scores are therefore generated according to each individual respondent's choice to each ICA question used.

The student's total score for each dimension, i.e., how he perceives his college environment as measured by the ICA, is then calculated by summing the constant weight of each respective question with the numerical value generated by the student's response. Detailed information on the ICA statements used, the constant weights for each of the thirty-three dimensions and the variable weights calculated

according to responses are found in Appendix C. Information on the statistical procedures and total format of the ICA is available in the Inventory of College Activities Manual (8, p. 8).

The Achiever Personality Scale of the Opinion, Attitude, and Interest Survey (O AIS), is considered an appropriate instrument to measure academic motivation. The Achiever Personality Scale of the O AIS:

...measures personality factors associated with the traditional criterion of academic success, grades. Students who score high (80th percentile or higher) ...tend to realize their potential ability and/or achieve high grade-point averages in college. The AP Scale predicts college grades about as well as the typical academic ability test. Furthermore... scores from AP have a negligible correlation with scores from ability tests; that is, this scale measures something important in academic success not measured by ability tests. In short, AP is a good measure of academic motivation and conscientiousness (36, p. 2).

Validity coefficients of the O AIS personality scale is consistent with characteristics of good multi-score test or test batteries. Such tests must have: (1) low intercorrelations among the test scores, (2) high correlations between test scores and appropriate criteria, and (3) low correlations between test scores and inappropriate criteria. More specifically, the Achiever Personality scale correlates low with test scores from the Intellectual Quality scale (-.09), and the Social Adjustment scales (-.06). Also, the AP scale of the O AIS correlates low with Aptitude test scores (.09), ratings by teachers (-.02) and social adjustment ratings by

student peers (-.01). However, the AP scale of the OAIS correlates appreciably with grade-point averages (.34).

A student's academic strength can best be predicted when combinations of information on students is utilized. The AP scale of the OAIS makes a unique contribution to this type of prediction. In a study on Michigan freshmen, high school percentile rank (HSPR), Scholastic Aptitude Test--Verbal (SAT-V), Scholastic Aptitude Test--Math (SAT-M), CEEB English Composition Test (ECT), and OAIS Achiever Personality (AP) was used as assessment variables in order to determine what happens when the variables are optimally combined in different ways. Three large groups of students were studied; men in LSA, women in LSA, and men in engineering. The results of the study indicated that for the men in LSA, when the ECT is considered along with HSPR and SAT, the predictive accuracy is increased from 22.30% to 23.45%. Although the increase is statistically significant, it is of little practical importance. For the LSA women and engineering men, when ECT is considered along with HSPR and SAT the improvement in predictive efficiency is .9% and 2.4% respectively. However, for the three groups there is a substantial increase in predictive efficiency when the Achiever Personality scores are considered in the multiple regression equation along with the aforementioned variables. The improvement is 25.1% for LSA men, 25.4% for LSA women and 18.4% for engineering men (35).

Development of Treatment Procedures

Counseling procedures used in the present investigation differed from the typical counseling interview in that the subjects were more active in the interaction process. Furthermore, group procedures as well as individual programs were employed to enhance adjustment and development of the individual. It was felt that by employing both one-to-one counseling and group counseling, the subjects would profit from the advantages of each. In other words, the one-to-one sessions would provide a purposeful relationship between two people in which the focus is upon insight and working out methods of handling feelings and behaviors. The group counseling would provide opportunities to relate to individuals, alternate ways of behaving with others, an opportunity to help others, and mutual expression of feelings and interpretation of meanings.

Arthur W. Chickering in his book Education and Identity lists six conditions or vectors that make a difference in student development. He hypothesizes

...that each college can accelerate or retard development in each vector, and past research suggests six major sources of influence: (1) clarity of objectives and internal consistency, (2) institutional size, (3) curriculum, teaching, and evaluation, (4) residence hall arrangements, (5) faculty and administration, and (6) friends, groups, and student culture (22, p. 144).

Based on Chickering's hypothesis and reported research and realizing the feasible environmental arrangements that

can be manipulated, four environmental vectors were selected and defined for the purpose of this investigation.

Those four vectors are as follows:

(a) University and student objectives--student expectations previously established by the university, and student goals and purposes for attending college.

(b) Institutional size--finding meaningful, active, and satisfying experiences within a large university.

(c) Place of residence--finding meaningful peer-interaction (both socially and intellectually) within each student's place of residence.

(d) Faculty and administration--frequent and friendly interaction with the faculty and administration.

The treatment program took place over a period of fourteen weeks. Each week, one or more vectors was selected as the primary area of "emphasis." The following chart is a description of the treatment procedure utilized by the environmental facilitators:

<u>Week</u>	<u>Primary Area</u>	<u>Type of Meeting</u>
Sept. 6	Purposes, goals, and objectives for attending college	one-to-one
Sept. 13	Purposes, goals, and objectives for attending college	group
Sept. 20	Purposes, goals, and objectives for attending college	one-to-one
Sept. 27	Faculty and Administration/Student Interaction	group
Oct. 4	Faculty and Administration/Student Interaction	one-to-one

<u>Week</u>	<u>Primary Area</u>	<u>Type of Meeting</u>
Oct. 11	Faculty and Administration/Student Interaction	one-to-one
Oct. 18	Purposes, goals, and objectives	one-to-one
Oct. 25	Place of Residence	group
Nov. 1	Institutional size	group
Nov. 8	Institutional size	one-to-one
Nov. 15	All area check-list	one-to-one
Nov. 29	Purpose, goals, and objectives and faculty and administration	group
Dec. 6	Testing for evaluation purposes	group
Dec. 13	Party	group

A detailed description of the fourteen scheduled meetings is included in Appendix A.

Research Method

Each of the sixty-four (64) subjects participating in this investigation were randomly assigned to two groups. Thirty-two (32) subjects were selected for a control and the other one-half composed the treatment group. For purposes of this study, the independent or effect variable was the program specifically designed for environmental interaction of first-semester entering freshman students at Oklahoma State University. The four dependent or response variables were attrition rate, grade-point averages, academic motivation, and perceived environmental stimuli.

After the subjects were randomly assigned to the two groups, subjects in the treatment group were randomly

assigned to four separate sections. Each section contained eight (8) subjects. In this study it was necessary to use small groups in order to assure the facilitation of a high level of interpersonal response. It was further believed that such an arrangement would prevent the extraneous variable of the counselor from compounding the findings extracted from the study. In other words, the procedure allowed for four counselors to serve as program facilitators instead of one. This procedure should enhance the probability that the results of the study are attributed to the treatment program rather than the persons serving as environmental facilitators.

The four (4) counselors utilized in the investigation were each randomly assigned to one of the four groups. These facilitators were advanced graduate students in counselor education at Oklahoma State University. Their theoretical orientation to counseling practice was congruent and while they differed in experience all of them agreed to the purposes, procedures, and goals designed for the present study. They met a minimum of once each week for fourteen (14) consecutive weeks to plan and evaluate their procedures and to enhance the articulation of the total program. The subjects met with their assigned environmental facilitator at least two hours each week for fourteen consecutive weeks. In order to meet individual needs and differences, the meetings took place on both a one-to-one and group basis. In all cases a consistent interaction procedure, based on past

research was utilized. For a concise description of the program, see Appendix A.

At the end of the treatment period specific data were collected in order to analyze the results of the treatment program as compared with no treatment for each of four response variables: attrition rate, grade-point average, academic motivation, and perceived environmental stimuli.

To determine academic success, the Division of Student Affairs supplied the research with information indicating the grades each subject received and the total grade-point average earned for the courses in which he was registered. The data were then recorded in either the appropriate control or experimental group section. The Mann-Whitney U Test was used to determine if significance between the groups existed. (See hypotheses 1, 2, and 3 in Chapter I).

In order to determine attrition, the registrar's office supplied the researcher with information which indicated whether or not each subject had registered and was attending classes during the semester following the experiment. This data was then placed in the correct section; in other words, experimental or control groups. Fisher's Exact Probability Test was used to determine if significance between the groups existed. (See hypotheses 4, 5, and 6 in Chapter I).

Data relevant to perceived environmental stimuli were collected by the researcher by administering the Inventory of College Activities (ICA) to all experimental and control subjects. The instrument was administered during the week

prior to first-semester final examination week. The data from the ICA were appropriately recorded in either the experimental or control group section. The Mann-Whitney U Test was used to determine if significance between the groups existed. (See hypotheses 7, 8, and 9 in Chapter I).

In order to determine academic motivation, the Opinion, Attitude, and Interest Survey was administered to all experimental and control subjects during the week prior to the first-semester final examination week. Data from the Achiever Personality scales of the OAIS instrument were then placed in the appropriate experimental or control group section. The Mann-Whitney U Test was used to determine if significance between the groups existed. (See hypotheses 10, 11, and 12 in Chapter I).

Statistical Procedure

The statistical treatment selected for examination of the test data was the Mann-Whitney U Test (MWU). This statistic is one of the most powerful of the nonparametric tests and is an appropriate statistic when the level of measurement in the research is less than interval scaling. Siegel (79, p. 126) reported that if the MWU is applied to data that has been properly analyzed by a more powerful parametric test, for example, the t-test, its power-efficiency approaches 95.5 percent for large-sized samples and is close to 95 percent for moderate-sized samples. It has also been reported that the MWU is an excellent alternative to the

t-test but that it does not have the restrictive assumptions and requirements associated with the t-test (79).

For this investigation, MWU was used to test the hypothesis related to academic success, academic motivation, and perceived environmental stimuli. (See hypotheses 1, 2, 3, 7, 8, 9, 10, 11, and 12 in Chapter I). The Fisher Exact Probability Test was used to examine the nominal level data; in other words, attrition rate. (See hypotheses 4, 5, and 6 in Chapter I). That information did not meet the assumptions underlying the Chi-Square test since in each case there were cells with fewer expected frequencies of five or less.

The scoring of the ICA and the computation and statistical treatment of all the data was completed at the Oklahoma State University Computer Center. Computer programs composed by the Computer Center Staff were utilized to analyze the data.

Summary

The subjects for this investigation were selected from volunteer freshman students who resided in the Willham Residence Hall at Oklahoma State University. The total sample consisted of 64 students of which 32 were female and 32 were male. The subjects were randomly assigned to either a control group or an experimental group so that each group consisted of equal numbers of males and females. Subjects from the experimental group were then randomly assigned to one of four groups again so that each group consisted of equal

numbers of males and females. Four advanced graduate students from the Student Personnel and Guidance Department were randomly assigned to one of the four experimental groups to facilitate the environmental interaction program.

The study was designed to evaluate the impact of the environment on the student in four areas: academic success, academic motivation, attrition, and perceived environmental stimuli. Academic success was measured by grade-point averages, attrition rate was measured by determining the number of subjects who enrolled for classes the second semester, academic motivation was measured by the AP scale of the OAIS, and perceived environmental stimuli was measured by the ICA.

The fourteen week counseling treatment utilized both the one-to-one and group counseling processes. Four environmental vectors selected as sources of influence were: university and student objectives, institutional size, place of residence, and faculty and administration.

The Mann-Whitney U Test was selected for examination of the data in regard to the academic success, perceived environmental stimuli and academic motivation variables. The Fisher Exact Probability Test was used to analyze the attrition rate variable. The statistical treatment of all the data was completed at the Oklahoma State University Computer Center.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

The purpose of this chapter is to present the results of the findings using the methods outlined in Chapter III. The finding for each of the response variables will be reported following the statement of each hypothesis. A .05 level of confidence was established and utilized as a basis for rejecting or not rejecting each hypothesis.

Findings of the Study

The study was conducted during the fall semester of the academic year, 1971-1972. It included 64 first-semester freshman students residing in Willham Hall at Oklahoma State University.

For hypothesis 1, the Mann-Whitney U Test was used to test for significance. It stated:

There are no significant differences between the experimental group and control group in academic success at the end of one semester as measured by their GPA.

The U value obtained (Table I) was 425. Since the sample for this hypothesis is larger than 20, the significance of an observed value of U is obtained by determining a Z score.

The obtained Z score (see Table I) was .57 which is equivalent to a two-tailed p value of .14. It was concluded that there are no significant differences between the experimental group and the control group in academic success. Therefore, hypothesis 1 is tenable.

TABLE I
MANN-WHITNEY U TEST SCORES REFLECTING
DIFFERENCES IN G.P.A.

Groups Compared	U Score	Z Score	p Value
Experimental-Control	425	.57	.14
Female Control- Female Experimental	95*	***	***
Male Control- Male Experimental	107**	***	***

*When $N_1 = 15$, $N_2 = 16$, U Score must be equal or less than 70 to be significant at .05 level of confidence.

**When $N_1 = 15$, $N_2 = 15$, U Score must be equal to or less than 64 to be significant at .05 level of confidence.

***Score cannot be calculated since $N_2 < 20$.

Hypothesis 2 states:

There are no significant differences between the experimental female subjects and the control female subjects in academic success as measured by their GPA.

The Mann-Whitney U value obtained (Table I) was 107. The U value at the previously set level of significance should be equal to or less than 70. It was concluded that there are no significant differences in academic success between the

experimental female subjects and the control female subjects. Hypothesis 2 is tenable.

Again, the Mann-Whitney U Test was used to test for significance in hypothesis 3, which states:

There are no significant differences between the experimental male subjects and the control male subjects in academic success as measured by their GPA.

The U value obtained (Table I) was 95. The U value at the previously set level of confidence should be equal to or less than 64. It was concluded that there are no significant differences in academic success between the experimental male subjects and the control male subjects. Hypothesis 3 is tenable.

Although the treatment process was designed to assist the subjects in achieving academic success, in each case, no significant differences between the control and experimental groups were found. It can be concluded that either the treatment program had no effect on academic achievement or that grade-point averages are an ineffective or inadequate means for measurement.

The Fisher Exact Probability Test was used to test for significance in hypotheses 4, 5, and 6. Hypothesis 4 states:

There are no significant differences in attrition between the experimental group and the control group.

The p value obtained (Table II) was .09. It was concluded that there are no significant differences in attrition between the experimental group and the control group. Therefore, hypothesis 4 is tenable.

TABLE II
FISHER EXACT PROBABILITIES VALUES REFLECTING
DIFFERENCES IN ATTRITION

Groups Compared	p Value
Experimental-Control	.09
Female Experimental- Female Control	.26
Male Experimental- Male Control	.24

Hypothesis 5 states:

There are no significant differences in attrition between the experimental female subjects and the control female subjects.

The p value obtained (Table II) was .26. It was concluded that there are no significant differences in attrition between the experimental female subjects and the control female subjects. Hypothesis 5 is tenable.

Hypothesis 6 states:

There are no significant differences in attrition between the experimental male subjects and the control male subjects.

The p value obtained (Table II) was .25. It was concluded that there are no significant differences in attrition between the experimental male subjects and the control male subjects. Hypothesis 6 is tenable.

The treatment program was designed to assist the students in their attempt to better adjust to and consequently feel more positively towards their college environment. It

was intended that attrition rate would be an appropriate measurement. Although the results when comparing the experimental subjects with the control subjects were not significant at the .05 level of confidence, a p of .09 was obtained. Therefore, it appears that the treatment program may have had some positive impact on the experimental subjects as measured by attrition rate.

The Mann-Whitney U Test was used for hypotheses 7, 8, and 9 to determine statistical significance. Each are concerned with testing for significant differences in perceived environmental stimuli. Hypothesis 7 states:

There are no significant differences in perceived environmental stimuli between the control group and the experimental group as measured by the Inventory of College Activities (ICA).

Table III displays the results relevant to hypothesis 7. Table III indicates the p value for the five broad categories of perceived environmental stimuli. In each case, median scores are also displayed. However, in every instance where significant probability values were obtained the difference between dichotomous groups, e.g., experimental and control groups, are not clearly evident from an examination of median scores inasmuch as it is possible to have identical median scores in two groups where significant differences exist. In such instances, however, the nature of the differences in distributions of scores has been carefully delineated in the text.

The five broad categories of environmental stimuli and the p value obtained for each include: the Peer Environment--

TABLE III
 SCORES REFLECTING DIFFERENCES IN PERCEIVED
 ENVIRONMENTAL STIMULI BETWEEN THE
 CONTROL GROUP AND EXPERIMENTAL
 GROUP

Dimension	Exper. Median Scores	Control Median Scores	z- Score	p- Value
The Peer Environment--Interper- sonal Behavior	5889	5887	.41	.34
1. Competitiveness vs. Cooperativeness	1757	1757	1.22	.11
2. Organized Dating	1043	1043	1.46	.07
3. Independence	1083	1083	.50	.30
4. Cohesiveness	1000	1000	.03	.48
5. Informal Dating	1000	1000	.70	.23
The Peer Environment--Non- Interpersonal Behavior	11440	11440	.44	.33
6. Femininity	1049	1053	.93	.17
7. Drinking vs. Religiousness	1240	1242	1.37	.09
8. Musical and Artistic Activity	1114	1114	.69	.24
9. Leisure Time	1000	1000	.92	.18
10. Career Indecision	1023	1023	.82	.19
11. Regularity of Sleeping Habits	1990	1990	.35	.36
12. Use of the Library	1000	1000	.80	.21
13. Conflict with Regulations	1004	1004	.60	.27
14. Student Employment	1010	1010	.37	.36
15. Use of Automobiles	1010	1000	1.22	.05*
16. Involvement in the Class	1491	1492	.21	.41
The Classroom Environment	7503	7505	.95	.17
17. Verbal Aggressiveness	1118	1118	1.79	.04*
18. Extraversion of Instructor	1570	1569	1.39	.08
19. Familiarity with Instructor	1037	1037	1.18	.11
20. Organization in the Classroom	1286	1285	1.79	.04*
21. Severity of Grading	1000	1000	1.06	.14
The Administrative Environment	4000	4450	1.89	.03*
22. Severity of Administrative Policy Against Drinking	1000	900	.55	.29
23. Severity of Administrative Policy Against Aggression	1000	1250	2.34	.01*
24. Severity of Administrative Policy Against Heterosexual Activity	1000	1000	.69	.24
25. Severity of Administrative Policy Against Cheating	1000	1000	1.51	.06
26. Academic Competitiveness	1038	1041	.86	.19

TABLE III (Continued)

Dimension	Exper. Median Scores	Control Median Scores	z- Score	p- Score
The College Image	11640	11639	.14	.44
27. Concern for the Individual Student	1831	1831	.13	.45
28. School Spirit	1929	1929	.07	.47
29. Permissiveness	1396	1396	.06	.48
30. Snobbishness	1842	1842	.01	.50
31. Emphasis on Athletics	1000	1000	.86	.19
32. Flexibility of the Curriculum	1464	1465	.94	.17
33. Emphasis on Social Life	1133	1133	1.78	.04*

*Significant at .05 level of confidence.

Interpersonal Behavior ($p = .34$), the Peer Environment--
Noninterpersonal Behavior ($p = .33$), the Classroom Environ-
ment ($p = .17$), the Administrative Environment ($p = .03$),
and the College Image ($p = .44$). It was concluded that
there are significant differences in the students' scores
on the category of the environmental stimuli test designed
to measure the stimuli of the Administrative Environment.
Inspection of the scores would indicate that the control
group had an accumulative higher score than did the experi-
mental group which when interpreted would reflect that
the control group perceives the Oklahoma State University
Administration as having more severe or strict policies
against behaviors like drinking in residence halls, aggres-
sion, heterosexual relations in residence halls, and
cheating on examinations than do the experimental group.

As reflected in Table III, factors 15, 17, 20, 23, and 33 are significant at the .05 level of confidence. It was concluded that there are significant differences in students' scores on the factors designed to measure Use of Automobiles, Verbal Aggressiveness, Severity of Administrative Policy Against Aggression, and Emphasis on Social Life.

Inspection of these data reflects that more of the experimental students drive cars during the school year than do the control students. More of the experimental students argue with their instructor, ask questions in class and make wisecracks in class than do the control students. More of the experimental students report a higher degree of organization in the classroom, i.e., assigned seats, attendance required, classes meet as regularly scheduled time and place, than do the control students. The control students view Oklahoma State University as having more severe policies against organizing demonstration policies, participating in water fights or dormitory raids, and other forms of student aggression than do the experimental students. The experimental students report a higher degree of emphasis on social life than do the control students. The experimental students are more likely to feel it is important to belong to the right club, group or fraternity or sorority and that there is a great deal of conformity among the students than do the control students. Hypothesis 7 was rejected for the variables Administrative Environment, Use of Automobile, Verbal Aggressiveness, Organization in the Classroom,

Severity of Administrative Policy against Aggression, and Emphasis on Social Life. Hypothesis 7 was not rejected for all other variables.

Hypothesis 8 states that:

There are no significant differences in perceived environmental stimuli between the experimental female subjects and the control female subjects as measured by the Inventory of College Activities (ICA).

The U value at the previously set level of confidence should be equal to or less than 75 when $n_1 = 16$ and $n_2 = 16$. Table IV reflects the results relevant to hypothesis 8. The table indicates the U value for each of the 33 ICA environmental factors and also indicates the U value for the 5 broad categories of environmental stimuli.

The 5 broad categories of environmental stimuli and the U value obtained for each include: the Peer Environment-- Interpersonal Behavior (U = 106), the Peer Environment-- Noninterpersonal Behavior (U = 64), the Classroom Environment (U = 106), the Administrative Environment (U = 97), and the College Image (U = 116). It was concluded that there are significant differences in the students' scores on the category of the environmental stimuli test designed to measure the stimuli of the Peer Environment--Noninterpersonal Behavior. Inspection of the data would indicate that the experimental female group had an accumulative higher score than did the control female group which when interpreted would reflect that the students in the experimental group tend to select majors in artistic or social fields, engage

TABLE IV
 SCORES REFLECTING DIFFERENCES IN ENVIRONMENTAL
 STIMULI BETWEEN THE CONTROL FEMALE GROUP
 AND THE EXPERIMENTAL FEMALE GROUP

Dimension	Exper. Median Scores	Control Median Scores	U- Value
The Peer Environment--Inter- personal Behavior	5887	5881	106
1. Competitiveness vs. Cooperativeness	1756	1756	115
2. Organized Dating	1041	1043	108
3. Independence	1083	1083	80
4. Cohesiveness	1000	1000	107
5. Informal Dating	1000	1000	128
The Peer Environment--Non- Interpersonal Behavior	11447	11482	64*
6. Femininity	1053	1053	108
7. Drinking vs. Religiousness	1240	1242	110
8. Musical and Artistic Activity	1114	1113	87
9. Leisure Time	1000	1000	120
10. Career Indecision	1023	1021	69*
11. Regularity of Sleeping Habits	1990	1990	128
12. Use of the Library	1000	1000	115
13. Conflict with Regulations	1006	1000	66*
14. Student Employment	1000	1000	112
15. Use of Automobiles	1010	1000	80
The Classroom Environment	7501	7502	106
16. Involvement in the Class	1491	1492	122
17. Verbal Aggressiveness	1118	1116	84
18. Extraversion of the Instructor	1570	1568	104
19. Familiarity with the Instructor	1037	1037	119
20. Organization in the Classroom	1285	1285	104
21. Severity of Grading	1000	1000	120
The Administrative Environment	4025	4350	97
22. Severity of Administrative Policy Against Drinking	900	900	103
23. Severity of Administrative Pol- icy Against Aggression	1000	1250	90
24. Severity of Administrative Pol- icy Against Heterosexual Activity	1000	1000	127
25. Severity of Administrative Pol- icy Against Cheating	1000	1500	88
26. Academic Competitiveness	1038	1039	108

TABLE IV (Continued)

Dimension	Exper. Median Scores	Control Median Scores	U- Value
The College Image	11636	11639	116
27. Concern for the Individual Student	1833	1835	127
28. School Spirit	1929	1929	121
29. Permissiveness	1397	1398	122
30. Snobbishness	1842	1838	126
31. Emphasis on Athletics	1000	1000	128
32. Flexibility of the Curriculum	1464	1468	108
33. Emphasis on Social Life	1133	1133	102

*Significant at .05 level of confidence.

in social drinking, be more argumentative, competitive and independent, view the Oklahoma State University policies as more liberal, be involved in cultural activities, change their career plans, and drive cars during the school year more than the students in the control group.

As reflected in Table IV, factors 10 and 13 are significant at the .05 level of confidence. It was concluded that there are significant differences in students' scores on the factors designed to measure Career Indecision and Conflict with Regulations. Inspection of these data reflects that the experimental students tend to change their major fields and long-term career plans more than the students in the control group. The experimental female students more frequently lose privileges for infraction of college rules than do the control female students. Hypothesis 8 was rejected for the variables Peer Environment--Noninterpersonal

Behavior, Career Indecision, and Conflict with Regulations.

Hypothesis 8 was not rejected for all other variables.

Hypothesis 9 states:

There are no significant differences in perceived environmental stimuli between the experimental male subjects and the control male subjects as measured by the Inventory of College Activities (ICA).

The U value at the previously set level of confidence should be equal to or less than 70 when $n_1 = 16$ and $n_2 = 15$. Table V reflects the results relevant to hypothesis 8. The table indicates the obtained U value for each of the 33 ICA environmental factors and also indicates the U values for the five broad categories of environmental stimuli.

The five broad categories of environmental stimuli and the U values obtained for each include: the Peer Environment--Interpersonal Behavior (U = 107), the Peer Environment--Noninterpersonal Behavior (U = 66), the Classroom Environment (U = 104), The Administrative Environment (U = 84), and the College Image (U = 95). It was concluded that there are significant differences in the students' scores on the category of the environmental stimuli test designed to measure the stimuli of the Peer Environment--Noninterpersonal Behavior. Inspection of the data would indicate that the control male group had an accumulative higher score than did the experimental male group which when interpreted would reflect that the male students in the control group tend to be more argumentative, independent and competitive, spend more time going to movies and playing games, be more undecided regarding their career plans and lose privileges for infractions

TABLE V
 SCORES REFLECTING DIFFERENCES IN ENVIRONMENTAL
 STIMULI BETWEEN THE CONTROL MALE GROUP
 AND THE EXPERIMENTAL MALE GROUP

Dimension	Exper. Median Scores	Control Median Scores	U- Value
The Peer Environment--Inter- Personal Behavior	5890	5891	107
1. Competitiveness vs. Cooperativeness	1760	1757	94
2. Organized Dating	1043	1045	87
3. Independence	1083	1083	87
4. Cohesiveness	1000	1000	99
5. Informal Dating	1005	1000	100
The Peer Environment--Non- Interpersonal Behavior	11434	11450	66*
6. Femininity	1049	1049	107
7. Drinking vs. Religiousness	1242	1242	84
8. Musical and Artistic Activity	1114	1114	106
9. Leisure Time	1000	1000	87
10. Career Indecision	1023	1023	87
11. Regularity of Sleeping Habits	1990	1990	110
12. Use of the Library	1000	1000	112
13. Conflict with Regulations	1000	1004	66*
14. Student Employment	1010	1010	114
15. Use of Automobiles	1010	1010	117
The Classroom Environment	7506	7505	104
16. Involvement in the Class	1490	1491	119
17. Verbal Aggressiveness	1119	1118	100
18. Extraversion of the Instructor	1570	1569	99
19. Familiarity with the Instructor	1036	1040	89
20. Organization in the Classroom	1288	1285	89
21. Severity of Grading	1000	1000	111
The Administrative Environment	4000	4500	89
22. Severity of Administrative Pol- icy Against Drinking	1000	1000	119
23. Severity of Administrative Pol- icy Against Aggression	1000	1250	76
24. Severity of Administrative Pol- icy Against Heterosexual Activity	750	1000	96
25. Severity of Administrative Pol- icy Against Cheating	1000	1000	110
26. Academic Competitiveness	1041	1041	107

TABLE V (Continued)

Dimension	Exper. Median Scores	Control Median Scores	U- Value
The College Image	11642	11638	95
27. Concern for the Individual Student	1831	1830	114
28. School Spirit	1929	1929	117
29. Permissiveness	1395	1395	116
30. Snobbishness	1842	1842	119
31. Emphasis on Athletics	1000	1000	98
32. Flexibility of the Curriculum	1464	1464	110
33. Emphasis on Social Life	1139	1133	86

*Significant at .05 level of confidence.

of college rules than the male students in the experimental group.

As reflected in Table V, factor 13, Conflict with Regulations, is significant at the .05 level of confidence. It was concluded that there are significant differences in the experimental male students' scores and the control male students' scores on the factor designed to measure Conflict with Regulations. Inspection of the data reflects that the male control students' scores were higher than the experimental male students' scores which when interpreted would indicate that the control male students tend to lose privileges for infractions of college rules more than the experimental male students. Hypothesis 9 was rejected for the variables Peer Environment--Noninterpersonal Behavior and Conflict with Regulations. Hypothesis 9 was not rejected for all other variables.

The treatment program was designed to manipulate the environment such that the experimental subjects would receive different environmental stimuli than would the control subjects. The results and analysis of the ICA data indicate that the treatment program was effective in altering the perceived environmental stimuli in those cases previously mentioned. It is interesting to note the factor, Conflict with Regulations and Peer Environment--Noninterpersonal Behavior. The female experimental subjects, when compared with the control female subjects, scored significantly higher on these two factors. The reverse of that was true for the male subjects. The control male subjects, when compared with the experimental male subjects, scored significantly higher on these two factors.

The Mann-Whitney U Test was also used to test for significance for hypotheses 10, 11, and 12.

Hypothesis 10 states:

There are no significant differences in academic motivation between the experimental group and control group as measured by the Achiever Personality Scale of the Opinion, Attitude, and Interest Survey (OAIS).

Table VI presents the results relevant to hypothesis 10. The U-value obtained (Table VI) was 351. Since the n_1 and n_2 for this hypothesis is larger than 20 ($n_1 = 32$ and $n_2 = 31$), the significance of an observed value of U is obtained by determining a Z score. The obtained Z score (Table VI) was 1.99 which is equivalent to a two-tailed p-value of .01. It was concluded that there are significant differences

between the experimental group and control group on a test designed to measure academic motivation.

TABLE VI
MANN-WHITNEY U SCORES REFLECTING DIFFERENCE
IN ACADEMIC MOTIVATION

Groups Compared	U- Value	Z- Score	p- Value
Experimental-Control	351	1.99	.02*
Female Control- Female Experimental	87**	****	****
Male Control- Male Experimental	88***	****	****

*Significant at .05 level of confidence.

**U-value must be ≥ 75 in order to be significant when $n_1 = 16$ and $n_2 = 16$.

***U-value must be ≥ 70 in order to be significant when $n_1 = 16$ and $n_2 = 15$.

****This score cannot be calculated since n_1 and n_2 are less than 20.

Inspection of the scores would indicate that the experimental group had an accumulative higher score than did the control group which when interpreted would reflect that the experimental students think and feel more like students who receive high grades than do the control students.

Hypothesis 11 states:

There are no significant differences in academic motivation between the experimental male subjects and the control male subjects as measured by the AP scale of the OAIS.

Table VI presents the results relevant to hypothesis 11. The U value obtained (Table VI) was 87. The U value at the previously set level of significance should be equal to or less than 75. It was concluded that there are no significant differences between the experimental male subjects and the control male subjects on a test designed to measure academic motivation. Hypothesis 11 is tenable.

Hypothesis 12 states:

There are no significant differences in academic motivation between the experimental female subjects and the control female subjects as measured by the AP scale of the OAIS.

Table VI presents the results relevant to hypothesis 12. The U value obtained (Table VI) was 88. The U value at the previously set level of significance should be equal to or less than 70. It was concluded that there are no significant differences between the experimental female subjects and the control female subjects on a test designed to measure academic motivation. Hypothesis 12 is tenable.

The treatment for the present investigation was for fourteen weeks. Measurement for effect was at the end of the treatment program. However, the AP scale of the OAIS is a predictive scale and therefore measures something quite different than does the other dependent variables, i.e., academic success, attrition and perceived environmental stimuli. Scores from the AP scale provide an estimate of the kind of grades a student will get in college. Students who score high on the AP scale tend to think and feel like students who receive high grades. The results of this

investigation indicate that the experimental students scored higher than did the control students on the AP scale. It can be predicted, then, that the students who participated in the experimental group will receive higher grades in college than those students in the control group.

Summary

The findings of this investigation indicate that for two of the dependent variables, i.e., academic success and attrition, no significant differences existed between the control group and the experimental group. Significant differences were found to exist on some of the ICA factors and on academic motivation. Specifically, the experimental groups were significantly higher than the control groups on the environmental stimuli factors of Use of Automobiles, Verbal Aggressiveness, Organization in the Classroom, and Emphasis on Social Life. The control group was significantly higher than the experimental group on the environmental stimuli factors of Administration Environment and Severity of Administrative Policy Against Aggression. The experimental female group was significantly higher than the control female group on environmental stimuli factors of Peer Environment--Noninterpersonal Behavior and Conflict with Regulations. The control male group scored significantly higher than the experimental male group on the factors Peer Environment--Noninterpersonal Behavior and Conflict with Regulations.

On the predictive scale, i.e., the AP scale of the OAIS, the experimental group scored significantly higher than did the control group.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to determine the effect of a systematic and carefully designed program of assistance in environmental interaction when applied to first-semester freshman students at Oklahoma State University. Evaluation was undertaken in the areas of academic success, attrition, perceived environmental stimuli and academic motivation. The investigation was specifically designed to determine if there were significant differences in the dependent variables as stated above between the randomly selected control group and the experimental group. In addition, sex-based response differences were investigated between control and experimental samples to determine if male and female freshman react differently to environmental interaction.

The twelve tested hypotheses were as follows:

Hypothesis 1. There are no significant differences between the experimental group and control group in academic success at the end of one semester as measured by their GPA.

Hypothesis 2. There are no significant differences in academic success between the experimental female subjects and the control female subjects as measured by GPA.

Hypothesis 3. There are no significant differences in academic success between the experimental male subjects and the control male subjects as measured by GPA.

Hypothesis 4. There are no significant differences in attrition between the control group and the experimental group.

Hypothesis 5. There are no significant differences in attrition between the experimental female subjects and the control female subjects.

Hypothesis 6. There are no significant differences in attrition between the experimental male subjects and the control male subjects.

Hypothesis 7. There are no significant differences in perceived environmental stimuli between the control group and the experimental group as measured by the ICA.

Hypothesis 8. There are no significant differences in perceived environmental stimuli between the experimental female subjects and the control female subjects as measured by the ICA.

Hypothesis 9. There are no significant differences in perceived environmental stimuli between the experimental male subjects and the control male subjects as measured by the ICA.

Hypothesis 10. There are no significant differences in academic motivation between the experimental group and control group as measured by the AP scale of the OAIS.

Hypothesis 11. There are no significant differences in academic motivation between the experimental male subjects and the control male subjects as measured by the AP scale of the OAIS.

Hypothesis 12. There are no significant differences in academic motivation between the experimental female subjects and the control female subjects as measured by the AP scale of the OAIS.

The study took place during the fall semester of the academic year 1970-1971 and included a random sample of volunteer freshman students who resided in Willham Hall. One-half of the female sample was randomly assigned to the control group and the other one-half of the female sample was randomly assigned to one of four experimental groups. The same procedure was followed for assigning the male subjects to groups.

The experimental subjects participated in an environmental interaction program facilitated by four advanced graduate students studying in the field of Student Personnel and Guidance. The advanced graduate students were each randomly assigned to one of the four groups. The environmental interaction program was designed to assist the environmental student in discovering, manipulating, changing, coping with, and adjusting to the environment of the Oklahoma State University campus. More specifically, the areas of the Oklahoma State University environment included: goals and purposes of both the University and of the student, institutional

size, place of residence, and faculty and administration. The experimental subjects met with their environmental facilitator at least two hours each week for fourteen consecutive weeks. Each subject was exposed to both a one-to-one and group interaction as part of the treatment process.

The Mann-Whitney U Test and the Fisher Exact Probability Test were used to analyze the data. The null hypotheses were then rejected or not rejected on the basis of the analysis of the data.

The instruments that constituted the post-test were the Inventory of College Activities and the Achiever Personality Scale of the Opinion Attitude and Interest Survey.

Conclusions

The following conclusions can be stated from the results of the study:

1. There are not significant differences between the control groups and experimental groups in academic success at the end of one semester as measured by grade point average. It can be concluded that either the treatment program had no effect on academic success, that GPA is an inadequate or ineffective means of measuring academic success, or that the length of experimental time was not sufficient to produce measurable differences. However, as indicated later in this chapter, the experimental subjects do tend to think and feel more like students who receive high grades than do the control subjects. It seems reasonable then to conclude that

although no significant differences in GPA were found at the end of one semester, it can be predicted that the experimental subjects will receive higher grade-point averages in the future than will the control subjects.

2. There are not significant differences between the control group and experimental groups in attrition at the end of one semester. Although the null hypothesis relating to a significant difference in attrition was not rejected at the .05 level of confidence, a p of .09 was determined. It does appear then that the treatment program had a positive effect on the experimental subjects. This finding offers support to Pervin's (71) study when he concluded that students who saw their values, goals, and objectives as being out of harmony with their college environment tend to be dissatisfied with their college and begin to think of dropping out. He suggested that positive results would occur if more attention be given to the interaction between the individual and his environment. The treatment in this study was designed to facilitate positive interaction between the student and his environment and the results obtained offers reinforcement for Pervin's suggestion.

3. There are significant differences between the control group and experimental groups in perceived environmental stimuli as measured by the Inventory of College Activities.

It was concluded that the control subjects perceive the administrative environment as having more strict policies governing student behavior than do the experimental subjects

and that the control subjects perceive the administration to have more severe policies against student aggression than do the experimental subjects.

These conclusions can be explained by the impetus of the treatment program. One area of emphasis in the treatment program was the facilitation of interaction between the subjects and the faculty and administration. Theoretically, this interaction would allow the experimental subjects to be happy, content, and more able to cope with their environment. Also, fewer obstacles would exist and those that do would have less negative impact. This interaction with faculty and administration should facilitate the student's better understanding of reasons for the policies that do exist and knowledge of how policies can be changed. It appears, then, that the treatment program has facilitated the experimental student's developing more positive attitudes about working within the system and developing more tolerance towards the administrative policies even though they may be in disagreement with such policies.

Another conclusion from the study was that the experimental subjects perceive their academic class settings to be more structured and organized than do the control subjects and that the experimental subjects exhibit more verbal aggressiveness with their instructors than do the control subjects. These results appear to offer at least a partial solution to Clark Kerr's (50) concern when he proposed that one of the major problems of the university yet to be faced

is establishing a range of contact between faculty and students broader than the one-way route via lectures. It seems that the treatment process utilized in this study has in fact broadened the route. The experimental subjects more than the control subjects reported that they argued openly with their instructors and asked questions and made wisecracks in class. If the process of learning and teaching is really an exchange of ideas, then the experimental subjects are more aware of their classroom environment, they are more ready to challenge, question and even disagree, and therefore, learn.

It was concluded that the experimental subjects perceive their collegiate environment as having more emphasis on social life than do the control subjects. The two vectors institutional size and place of residence, stressed in the treatment process, emphasized the importance of meaningful social experience. The treatment program attempted to teach the significance of social life and to facilitate the student's social development. This emphasis is certainly congruent with goals, purposes, and objectives of divisions of student affairs in most colleges. If, then, the developing of meaningful social relationships is a significant function of higher education, the experimental subjects more than the control subjects are more aware and socially involved in their environment and thus profit from their college experience.

It was concluded that the experimental female subjects tend to have more conflict with university regulations than

do the control female subjects. The reverse was true for the male students. The control male subjects have more conflict with university regulations than do the experimental male subjects. This finding is consistent with the treatment program. The impetus of the program was to facilitate a new knowledge and sense of awareness. The program was directed at challenging the learned male and female roles and expectations and the developing of an awareness and understanding of people living within the university environment.

Much research is available which indicates that college women are more accepting and tolerant of rules and regulations than are men. Society teaches and even demands that women be more tolerant, passive and dependent than men. University housing administrators have in the past based rules and regulations on this concept. Many more rules and regulations applied to women than to men. For example, women were required to be in their place of residence at a designated time and it was then felt that this in turn would facilitate the university men returning to their place of residence. But it was the women, because of their passive and accepting characteristics, that the rules directly affected; not the men. Therefore, it seems reasonable to conclude that the treatment program facilitated the female's rejecting of the stereotyped expected behaviors of women and as a consequence, facilitated their behaving in a way that is sometimes incongruent with university regulations.

An explanation of why the control male subjects experienced more conflict with university regulations than did the experimental male subjects is related again to the societal learned behaviors expected of men. Men are more typically aggressive, independent, and competitive in our society than are women. It appears that the treatment program facilitated an awareness and understanding on the part of the experimental male subjects which assisted them in being more tolerant and even more accepting of the university rules and regulations.

The results of the study indicates that the experimental female subjects tend to experience more career indecision than do the control female subjects. Again this conclusion can be explained by understanding both the societal learned behaviors of entering college female students and the treatment program which the experimental students experienced. Many female students enter college with limited awareness of potential careers available to women. Many entering college females think of career opportunities in terms of the stereotyped opportunities such as teaching, nursing, or secretarial positions. This lack of awareness persists unless an opportunity to learn differently occurs. The treatment program facilitated an awareness of new possibilities through the emphasis on developing meaningful goals, objectives, and purposes for attending colleges. It seems that the results of this study reinforce past research as reported by Chickering (22) and Allport (1) which indicates that clarity of

purpose enhances student growth and development. It can be concluded that the experimental female subjects more than the control female subjects have developed goals, purposes, and objectives based on realistic opportunities rather than on stereotyped roles and expectations.

4. There are significant differences in academic motivation between the experimental subjects and the control subjects as measured by the Achiever Personality Scale of the Opinion, Attitude, and Interest Survey. Perhaps the most valuable results of the study were the findings regarding the significant difference in academic motivation between the experimental and control subjects. Academic motivation, as defined in this study, is a predictor for future academic success which may be more important than the success or lack of success experienced at the end of one semester. Past research by such people as Freedman (34), Sanford (77), and Chickering (22) suggests that the college environment does have an impact on changing attitudes and values on college students. Chickering (22) hypothesized that the arrangements of the environment can either accelerate or retard student development. Skinner (80) states that it is the environment, nothing more nor nothing less, that controls human behavior. The results of this study offers reinforcement for the past research related to the importance of the interaction between man and his environment. It can be concluded from this study that students' attitudes and values can be changed to be more consistent with students who

receive higher grades through appropriate environmental intervention.

Recommendations

1. Further studies should be conducted utilizing an environmental interaction program which could be used to validate this study and to accrue more data which might be useful in validity studies related to appropriate measurement instrumentation.

2. In reviewing the literature, it was found that most studies have concentrated on measuring the need-press or student characteristic, or environmental stimuli that exist at various universities and colleges. This investigator suggests that studies should also be conducted in an effort to intervene with the environment to produce favorable responses from the student population.

3. A review of the literature points out there is not one environmental climate at a university but that instead there are several different climates within a university setting. In view of that finding, the investigator suggests that environmental interaction studies be conducted within each of those different climates.

4. Further studies should be conducted utilizing an environmental interaction program whereby the interaction of length of time and effectiveness can be investigated.

5. This investigator suggests that a follow-up study be employed to determine the effects of the environmental

interaction program on future undergraduate and graduate school achievement.

Future research should be focused on the area of studying environmental interaction programs with the goal in mind of determining a learning environment most appropriate to meet the needs of both the student and the institution.

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APPENDIX A

DESCRIPTION OF TREATMENT PROCEDURE

DESCRIPTION OF TREATMENT PROCEDURE

Meeting Number 1

Type of Meeting

Environmental facilitators met with group members individually.

Plan

During the first meeting, each environmental facilitator met with his subjects on an individual basis in order to accomplish the following:

1. to establish a positive helping relationship;
2. to answer any questions regarding the program that the subject may have;
3. to gather needed information from the student
 - a. class schedule
 - b. convenient times for future meetings
 - c. convenient methods for contacting each other
 - d. brief background
4. to gain insight into the student's self-concept, fears, anxiety, conflicts, hopes, and dreams;
5. to start the student thinking about his objectives, purposes, and goals for attending college; and
6. to establish a time for the next meeting which will give each student a chance to meet and begin to establish relationships with other members of his group.

Meeting Number 2

Type of Meeting

Environmental facilitators met with subjects on a group basis.

Plan

During the second meeting each environmental facilitator met with his subjects on a group basis in order to accomplish the following:

1. to facilitate the building of relationships between the group members;
2. to initiate a discussion regarding the numerous reasons for why people attend college;
3. to encourage each student to discuss with the group the reasons he is attending OSU;
4. to assist each student in an effort to make more explicit his purposes, goals, and objectives for attending college;
5. to inform each student of university academic regulations;
6. to initiate a discussion regarding behaviors that are consistent with each student's goals, purposes, and objectives; and
7. arrange times when the facilitator can meet with each student during the next week.

Meeting Number 3

Type of Meeting

Environmental facilitators met with group members individually.

Plan

The purpose of the individual meetings with the students this week was:

1. to formalize the goals, purposes, and objectives that each student has for attending college;
2. to make sure that the students understand that he may wish to change these goals at a later date;
3. discuss with the student the behavior (time, people to contact, study habits, facilities, etc.) that are consistent with his goals; and
4. to indicate to the student when the next meeting will be held and that this next meeting will give each student an opportunity to meet two faculty members (the purpose being to facilitate better communication and understanding between the faculty and the students).

Meeting Number 4

Type of Meeting

Environmental facilitators met with subjects on a group basis.

Plan

During this meeting, each student is given an opportunity to meet with two "model" faculty members. The primary purpose of this encounter is to acquaint the student with the input that faculty are people and that they are therefore, very individual and unique beings. Faculty are special kinds of people because of the position that they hold. They can and do have an enormous effect on the students that they encounter. Some serve as positive models and others

serve as negative models, but all who encounter students serve as models.

This encounter will provide for the student an experience that will facilitate:

1. his personal "knowing" of at least two professors on the Oklahoma State University campus;
2. the lessening of anxiety and fear in future attempts to have personal interaction with some of his own professors;
3. an opportunity for him to be known as a person and, even more importantly, an opportunity to be known as a meaningful individual;
4. his ability to differentiate between positive and negative faculty members;
5. his desire to have interactions with faculty members and, thus, increase his learning motivation and academic success;
6. his feeling a part of the University rather than an alienated number;
7. his ability to cope, to more positively and accurately interpret, and to adjust to his faculty-student environmental press; and
8. transfer of learning from this encounter with two faculty members to other faculty members.

Guidelines followed for the encounter include:

1. the encounter should take place when both the students and the faculty have ample time;
2. the encounter should take place in a physical environment where everyone feels relaxed and comfortable and where the environment is conducive to free exchange without interruptions and excessive distracting noise;
3. two professors should be invited who, in environmental facilitator's your judgment, will be willing to be open and honest and respect the students as meaningful individuals; and

4. making every attempt to facilitate both the faculty and student psychological comfort through introductions and facilitating conversation and relationships;

The format should include:

1. the faculty member's disclosing of himself as a person who has likes, dislikes, loves, hates, responsibilities, fears, future plans, and a history;
3. a discussion of who faculty members are--how are they different from each other and from students, how much do they get paid, how much education is required, are they all here because they like to teach, what kind of relationships or interactions do they want with students, do all faculty members desire the same kind of relationship with students, and what do faculty members want to be called; and
4. a discussion of who students are--what are their needs, why are they in college, what are their expectations, how they cope with negative faculty-student interactions, how can they be an individual rather than a number of the classroom environment, and what behaviors are acceptable to faculty members.

Meeting Number 5

Type of Meeting

Environmental facilitators met with group members individually.

Plan

In following through with the purposes and goals as was outlined in the previous weeks program, this meeting and the next was spent on facilitating the building of a relationship between the student and at least two professors that are teaching classes in which he is enrolled.

The following guidelines were followed:

1. some students may wish to make the arrangements for meeting his professors without any assistance;
2. some students may wish the facilitator's assistance in making the arrangements for the meeting;
3. some students may wish for the facilitator to meet with the student and the professor; and
4. some students may wish to invite his professors to the residence hall dining room for dinner, or to his room or to the snack bar for a coke while others may simply wish to make an appointment to visit with his professor in his office;

The purpose of this experience is to enhance:

1. the student's personal "knowing" of at least two of his professors;
2. the lessening of anxiety regarding future attempts to have personal interaction with his professors;
3. the opportunity for students to be known as a person rather than being just a number in his classes;
4. the student's desire to have interactions with faculty members and, thus, increase his learning motivation and academic success;
5. the student's ability to cope, to more positively and accurately interpret, and to adjust to his faculty-student environmental press; and
6. the transfer of learning from this encounter with two faculty members to other faculty members.

Meeting Number 6

Type of Meeting

Environmental facilitator met with group members individually.

Plan

Continuation of Meeting Number 5.

Meeting Number 7

Type of Meeting

Environmental facilitator met with group members individually.

Plan

The students have now had the opportunity to experience eight weeks of the college environment. For meeting number 7, each facilitator met individually with each of his assigned students to accomplish the following:

1. discuss with the student and give him an opportunity to reappraise his goals, objectives, and purposes for attending college;
2. make sure that each student understands the university academic requirements;
3. make sure that each student has a well defined definition of his stated purpose for attending Oklahoma State University;
4. discuss with the student the consistency of his behaviors in attaining those stated purposes; and
5. facilitate the solution of any questions, problems, or conflicts that the student may be experiencing.

Meeting Number 8

Type of Meeting

Environmental facilitators met with subjects on a group basis.

Plan

This week each environmental facilitator met with his students to discuss:

1. the implications of research findings that is related to the importance of meaningful peer relations in a student place of residence;
2. each student's perceptions of how he views his particular living environment;
3. possible alternatives available for each student to enhance more positive experiences in his living environment; and
4. making arrangements for any needed changes appropriate for the bettering of a more positive experience in the living environment.

Meeting Number 9

Type of Meeting

Environmental facilitator met with subjects on a group basis.

Plan

For this meeting, each environmental facilitator conducted a group meeting for the purpose of facilitating the active involvement of the students in those activities that are available on the Oklahoma State University campus. Because each student's needs in this area are unique, and the amount of involvement desired by each student will differ to varying degrees. The environmental facilitators took into consideration the following:

1. because of the size of Oklahoma State University, many students may not be aware of how to become involved;
2. students may not be aware of the many varied possibilities that exist;
3. some students may feel that their involvement is not needed or desired or that they do not possess appropriate skills;
4. some students may feel that the competition for involvement is too great; and
5. some students may fear rejection.

Those environment facilitators that were knowledgeable of the opportunities for student involvement at Oklahoma State University presented that information to his group. Those facilitators who did not possess this knowledge, received assistance from personnel from the Division of Student Affairs.

Meeting Number 10

Type of Meeting

Environmental facilitators met with group members individually.

Plan

As a continuation of last weeks effort to facilitate the involvement of students in activities outside of the classroom, each environmental facilitator met with each student on an individual basis to:

1. further explain the available opportunities;

2. to determine the degree of desire on the part of each individual student to become involved; and
3. to facilitate the appropriate contact in order to insure the subject's active participation.

Meeting Number 11

Type of Meeting

Environmental facilitators met with group members individually.

Plan

During this phase, each environmental facilitator met with each of his assigned students on an individual basis. The following is a check list designed to ensure that each student is positively experiencing the four environmental areas relating to this study. In a discussion with each student, the environmental facilitator was either able to give an affirmative response to each statement or intervene in the environment in an effort to be able to give a positive response in the near future.

The check list used is as follows:

Yes No

- | | | |
|-----|-----|--|
| ___ | ___ | 1. Each student has a clear definition of his stated purposes for attending Oklahoma State University. |
| ___ | ___ | 2. Each students' behaviors are consistent with that purpose. |
| ___ | ___ | 3. Each student is comfortable and satisfied with his physical environment. |

- — 4. Each student has within his place of residence opportunities for meaningful interchange and opportunities for shared intellectual interests.
- — 5. Each student has had at least a minimum friendly interaction with two faculty members that are not instructors of his classes and with at least two professors that are instructors of his classes.
- — 6. Each student is actively participating in some satisfying extracurricular activity.
- — 7. Each student is positively interpreting and coping with the values and attitudes of the Oklahoma State University student culture.
- — 8. Each student is realistic about his evaluation of his experiencing academic success.
- — 9. Each student is experiencing academic success according to his own definition of academic success.
- — 10. Each student is aware of the near future academic pressures, i.e., final examinations.
- — 11. Each student has the means of meeting these near future academic pressures i.e., tutors, study habits.

Meeting Number 12

Type of Meeting

Environmental facilitators met with subjects on a group basis.

Plan

The purpose of this group meeting was to assist students in their preparation for their first semester final examination and completion of their course work.

The following guidelines were followed:

1. each student should realistically appraise his academic standing in each class;
2. each student should make a realistic appraisal of the assignments he has left to complete for each class, i.e., books to read, papers to write, and etc.;
3. in an effort to budget time, each student should be encouraged to set deadlines for completion of assignments;
4. each student should decide what he needs to do (books to read, notes to review, etc.) to adequately prepare himself for his final examinations.
5. each student should develop a time schedule in order to accomplish the aforementioned expectations; and
6. when needed, each student should be encouraged to seek assistance from friends, tutors, and professors.

Included in this group meeting was a discussion on test taking behaviors, preparing for tests, and general review techniques.

Meeting Number 13

Type of Meeting

Environmental facilitators met with subjects on a group basis.

Plan

In an effort to evaluate the relationship between this environmental intervention program and academic motivation and perceived environmental stimuli, the Opinion, Attitude, and Interest Survey, and the Inventory of College Activities was given to the students during this group meeting.

The following instructions for completing the instruments were given to the students:

1. You are being asked to complete two instruments. Both instruments are used for studying the characteristics of undergraduate students. Please answer all items. Your responses will be kept entirely confidential, and will be used only in group comparisons for research purposes.
2. Neither instrument has a time limit so you may take as much time as you would like. However, I suggest that you work at a rapid but, comfortable rate. Do not spend much time on any item.
3. Use the soft lead, number two pencil that I have provided for you. Because the answer sheets are machine scored, it is essential that you fill in the appropriate circles neatly, accurately, and completely.
4. The first instrument is the Opinion, Attitude, and Interest Survey. Complete the name grid as instructed on side 1. Turn the answer sheet to side 2 and proceed to complete the instrument as instructed on the test booklet.
5. As soon as you complete the first instrument, give it to me and I will at that time give to you the second instrument--the Inventory of College Activities. The instruction are provided on the instrument. Again there is no time limit.
6. If you have any questions, raise your hand.
7. You may begin.

Meeting Number 14

Type of Meeting

Environmental facilitators met with subjects on a group basis.

Plan

The last meeting consisted of a discussion of plans for the next semester and a coke and pizza party. The purpose of the party was to solidify relationships and to serve as an indication of the facilitator's sincere appreciation of each individual.

APPENDIX B

GRADE POINT AVERAGES, ATTRITION RATES,
AND ACHIEVER PERSONALITY SCORES

GRADE POINT AVERAGES, ATTRITION RATES,
AND ACHIEVER PERSONALITY SCORES

Control Male				Experimental Male			
Student	GPA	Attrition	AP Score	Student	GPA	Attrition	AP Score
1	2.785	No	39	1	2.333	No	55
2	2.133	No	34	2	3.000	No	71
3	2.266	No	50	3	2.140	No	83
4	3.133	Yes	34	4	2.466	No	83
5	3.214	No	24	5	3.142	No	66
6	2.500	No	86	6	3.928	No	89
7	3.200	No	02	7	3.571	No	86
8	3.142	No	04	8	.727	No	07
9	2.200	No	55	9	3.812	No	71
10	3.615	No	13	10	1.785	No	50
11	3.333	No	34	11	1.833	No	13
12	1.846	No	83	12	.769	No	55
13	2.571	No	89	13	2.187	No	21
14	1.800	No	66	14	2.466	No	44
15	3.538	No	13	15	2.733	No	17
16	--	Yes	--	16	2.454	No	55

GRADE POINT AVERAGES, ATTRITION RATES,
AND ACHIEVER PERSONALITY SCORES

Control Female				Experimental Female			
Student	GPA	Attrition	AP Score	Student	GPA	Attrition	AP Score
1	2.461	No	60	1	1.700	No	01
2	1.769	No	34	2	3.428	No	55
3	1.714	No	29	3	1.769	No	83
4	3.437	No	39	4	2.928	No	89
5	1.666	No	39	5	2.733	No	44
6	3.437	No	60	6	2.785	No	50
7	2.500	No	07	7	2.785	No	29
8	3.200	No	55	8	2.000	No	21
9	2.461	Yes	29	9	3.437	No	75
10	3.428	No	39	10	3.500	No	86
11	3.066	No	60	11	3.000	No	29
12	3.214	Yes	44	12	3.000	No	89
13	2.500	No	34	13	2.705	No	79
14	3.000	No	39	14	2.928	No	44
15	0.000	Yes	29	15	--	Yes	44
16	3.000	No	83	16	3.285	No	83

ATTRITION RATE

Group	Matriculated First Semester	Matriculated Second Semester	Attri- tion
Experimental Males	16	16	0
Experimental Females	16	15	1
Total Experimental	32	31	1
Control Males	16	14	2
Control Females	16	13	3
Total Control	32	27	5

GRADE POINT AVERAGES

Group	Hours Attempted	Mean Hours	Mean GPA
Experimental Males	239	14.94	2.459
Experimental Females	223	14.87	2.799
Total Experimental	462	14.90	2.627
Control Males	230	15.33	2.752
Control Females	232	14.50	2.553
Total Control	462	14.84	2.640

APPENDIX C
DIMENSIONS AND WEIGHTS

THE PEER ENVIRONMENT--INTERPERSONAL BEHAVIOR

Item Description	Constant	Coefficient
Dimension 1: Competitiveness vs. Cooperativeness	1756.8	
I gambled with cards or dice (1)		4.862
I participated in an informal group sing (1)		- 4.215
I voted in a student election (2)		- 2.138
Dimension 2: Organized Dating	1037.4	
I arranged a date for another student (1)		5.182
I had a blind date (1)		2.613
I went to an over-night or week- end party (1)		2.579
Dimension 3: Independence	1082.9	
I argued with other students (2)		4.339
I was a member of a college athletic team (3)		3.539
I engaged in a demonstration against an administrative policy of the college (1)		2.951
Dimension 4: Cohesiveness	1000.0	
I discussed how to make money with other students (2)		5.000
Freshmen have to take orders from upperclassmen for a period of time (3)		5.000
Dimension 5: Informal Dating	1000.0	
I fell in love (3)		10.000

(1) Reported that they engaged in the activity frequently or occasionally during the school year;

(2) Reported that they engaged in the activity only frequently; and

(3) Reported Yes.

THE PEER ENVIRONMENT--NON-
INTERPERSONAL BEHAVIOR

Item Description	Constant	Coefficient
Dimension 6: Femininity	1048.7	
I tried on clothes in a store without buying anything (1)		4.555
I took weight-reducing or dietary formula (1)		4.243
I attended a ballet performance (1)		1.789
Dimension 7: Drinking vs. Religiousness	1238.0	
I drank beer (2)		5.249
I drank wine (1)		3.835
I prayed (not including grace before meals) (2)		- 1.648
Dimension 8: Musical and Artistic Activity	1108.3	
I attended a public recital or concert (1)		5.707
I played a musical instrument (1)		3.225
I listened to folk music (2)		2.151
Dimension 9: Leisure time	1000.0	
I went to the movies (2)		10.000
Dimension 10: Career Indecision	1019.9	
I changed my major field (3)		4.457
I changed my long-term career plans (3)		2.675
I had vocational counseling (3)		3.067
Dimension 11: Regularity of Sleeping Habits	2000.0	
I stayed up all night (1)		-10.000
Dimension 12: Use of the Library	1000.0	
I checked out a book or journal from the college library (2)		5.000
I studied in the library		5.000
Dimension 13: Conflict with Regulations	1000.0	
I attended church (2)		6.000
I drank beer (2)		4.000

THE PEER ENVIRONMENT--NONINTERPERSONAL
BEHAVIOR (Continued)

Item Description	Constant Coefficient	
Dimension 14: Student Employment	1.000	
I was employed during the school year (3)		10.000
Dimension 15: Use of Automobiles	1.000	
I drove a car (2)		10.000

- (1) Reported that they engaged in the activity frequently or occasionally during the school year;
- (2) Reported that they engaged in the activity frequently only; and
- (3) Reported Yes.

THE CLASSROOM ENVIRONMENT

Item Description	Constant	Coefficient
Dimension 16: Involvement in the Class	1491.1	
The instructor encouraged a lot of class discussion (3)		4.714
The instructor knew me by name (3)		2.697
I overslept and missed a class or appointment (1)		- 3.750
Dimension 17: Verbal Aggressiveness	1115.8	
I sometimes argued openly with the instructor (3)		5.646
I asked questions in class (2)		3.226
I made wisecracks in class (1)		2.286
Dimension 18: Extraversion of the Instructor	1565.1	
The instructor was enthusiastic (3)		3.582
The instructor had a good sense of humor (3)		1.177
The instructor was often dull and uninteresting (3)		- 5.446
Dimension 19: Familiarity with the Instructor	1033.2	
I knew the first name of the instructor (3)		3.618
I was a guest in the home of the instructor one or more times (3)		3.545
I was in the office of the instructor one or more times (3)		3.169
Dimension 20: Organization in the Classroom	1286.5	
The students had assigned seating (3)		5.053
The class met only at a regularly scheduled time and place (3)		1.868
I came late to class (1)		- 2.972
Dimension 21: Severity of Grading	1000.0	
I flunked a course (3)		10.000

(1) Reported that they engaged in the activity frequently or occasionally during the school year;

(2) Reported that they engaged in the activity frequently only; and

(3) Reported Yes.

THE ADMINISTRATIVE ENVIRONMENT

Item Description	Constant	Coefficient
Dimension 22: Severity of Administrative Policy Against Drunking	0.0	
Administrative policy against being drunk		300.0
Administrative policy against drinking in living quarters		200.0
Dimension 23: Severity of Administrative Policy Against Aggression	0.0	
Administrative policy against organizing a student demonstration		250.0
Administrative policy against participating in water fight or dormitory raid		250.0
Dimension 24: Severity of Administrative Policy Against Heterosexual Activity	0.0	
Administrative policy against being alone with a date in your room in the day		250.0
Administrative policy against being alone with a date in your room at night		250.0
Dimension 25: Severity of Administrative Policy Against Cheating	0.0	
Administrative policy against cheating on exams		500.0

- (1) 1 = No policy against this
 2 = Reprimand or minor disciplinary action
 3 = Major disciplinary action (possible expulsion from college)
 4 = Sure expulsion from college

THE COLLEGE IMAGE

Item Description	Constant	Coefficient
Dimension 26: Academic Competitiveness	1034.5	
The students are under great pressure to get high grades (3)		3.997
There is keen competition among most students for grades (3)		3.918
Most students are of a very high calibre academically (3)		2.430
Dimension 27: Concern for the Individual Student	1835.2	
The atmosphere of the college was rated as warm (4)		3.430
Most students are more like numbers in a book (3)		- 5.236
I felt lost when I first came to the campus (3)		- 2.225
Dimension 28: School Spirit	1929.3	
Being in this college builds poise and maturity (3)		3.823
The student body is apathetic and has little school spirit (3)		- 4.603
There is not much to do except to go to class and study (3)		- 3.132
Dimension 29: Permissiveness	1395.7	
The atmosphere of the college was rated as liberal (4)		5.501
The classes are usually run in a very informal manner (3)		2.292
The atmosphere of the college was rated as victorian (5)		- 3.082
Dimension 30: Snobbishness	1841.6	
The atmosphere of the college was rated as snobbish (5)		3.702
The atmosphere of the college was rated as practical-minded (4)		- 3.572
The atmosphere of the college was rated as realistic (4)		- 3.785
Dimension 31: Emphasis on Athletics	1000.0	
Athletics are overemphasized (3)		10.000

THE COLLEGE IMAGE (Continued)

Item Description	Constant	Coefficient
Dimension 32: Flexibility of the Curriculum	1459.6	
Outlets for creative activities (1)		4.276
Freedom in course selection (1)		4.014
Work required of you in courses (2)		- 3.153
Dimension 33: Emphasis on Social Life	1127.6	
The atmosphere of the college was rated as social (4)		5.390
Social Life (1)		3.985
Personal contacts with classmates (1)		1.901

- (1) Reported too much/too many or just about the right amount.
- (2) Reported too much/too many.
- (3) Reported Yes.
- (4) Reported very descriptive of the college atmosphere.
- (5) Reported very descriptive or in between as opposed to not at all descriptive of the college atmosphere.

VITA

Terry H. Henderson

Candidate for the Degree of

Doctor of Education

Thesis: AN EXPERIMENTAL INVESTIGATION OF THE RELATIONSHIP
BETWEEN ENVIRONMENTAL INTERVENTION AND SELECTIVE
CRITERIA ASSOCIATED WITH ACADEMIC ACHIEVEMENT

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