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CHAPTER I

STATEMENT OF THE PROBLEM

Ideally the expressed goals of the University and student perceptions of the school environment should be "congruent" (Herr, 1965; Pace, 1963). Unfortunately, too frequently they are not congruent (Executive Planning Committee of the University of Oklahoma, 1968). In fact, a contemporary problem of higher education is the lack of agreement or congruence between university and student objectives. Present student unrest is generally thought to be related to the need for change in the structure of existing social institutions, and the university is one of those social institutions for which change is wanting (Keniston, 1968). It is even argued (Friedenburg, 1965; Goodman, 1960) that the schools are not merely irrelevant, but they are one of the principle agencies of dissatisfaction in our society. Alientation and isolation afflict students who believe that universities are out of tune with the realities of the overwhelming social, economic, and political problems that confront them today. Students frequently come to the universities and colleges in pursuit of a liberal

education. Many of them are concerned with the complex questions that confront them daily, e.g., war, racial conflict, socio-economic inequalities, and moral and ethical problems. In this respect, today's students differ from their parents and predecessors, who were more concerned about finding a place in the existing social structure than in reforming it. The Executive Planning Committee of the University of Oklahoma reported the following:

> The incoming student is frequently and sadly disappointed...the freshman who is drawn to the university because he takes this rhetoric (that the university offers a liberal education) seriously, quickly discovers that it simply is not true. Hence his accusations of hypocrisy, his disillusionment, and his impulse to throw bricks through classroom windows. He feels that he has been sold a bill of goods under false pretenses and he is quite right (Executive Planning Committee of the University of Oklahoma, p. 3).

On October 16, 1968, then University President-elect J. Herbert Hollomon, released the definitive report of the Executive Planning Committee dealing with the University of Oklahoma's future.

> ...because the university has survived, however, does not necessarily mean that it is in good shape and out of trouble. A crisis in higher education results from failure of clear purposes for the university in the post-industrial society. And this lies in the far deeper problem of the universities role in a society constantly in motion between order and change. Most recent attempts at reform, as far as we can determine, have not examined or clarified the entire purpose of a university in all its aspects and by all those it serves in the larger community and by faculty and students and administrators (p. 1).

Purpose of Study

There has been little systematic investigation of student and University educational objectives, (Stern, 1966). The purpose of this study was to assess the educational environment as perceived by various groups (students, administration, and faculty) within the University of Oklahoma community. In addition, the influence of class, achievement, and affiliation variables upon the students' perceptions of the educational environment were studied.

Clarifying the purpose of a university involves improving communication between students, faculty, and administrators. Communication can be improved by studying the content and extent of differences between faculty and student perceptions of the educational environment. Areas of disagreement may be identified which may be meaningful topics of conversation among the three groups. Identifying areas of student disagreement may be a way of stimulating profitable discussion and contributing to fuller understanding among students. University characteristics are perceived differently by various student groups (Astin, 1965; Herr, 1965; Thistlewhite, 1959), and a sensitive university is open to how its students perceive university life. How students view the university is essential to how they interact with their environments (Webb, 1967). Knowing how students view university life may clarify in part the reinforcing qualities of campus life that for students lead to a sense of belonging, vocational decisions,

personal adjustment, and to the completion of a degree program (Pace & Stern, 1958). Significant findings of this study would add information about the University's environment and aid in the University's effort to clarify educational objectives.

Research Questions

Previous studies have shown that the educational environment can be assessed (Astin, 1965; Herr, 1965; Thistlewhite, 1959). The following general questions, to be answered on the basis of a description of the educational environment are now feasible to investigate: (1) Do the perceptions of classes differ from those of the faculty, administrators, and other classes? (2) Do achievement and affiliation variables have an effect on students' perceptions of the educational environment?

The specific questions referring to the perceptions of the University environment are summarized below. The following questions are called principal questions and they involve main effects.

1. To what extent do the perceptions of each of the four classes (freshmen, sophomores, juniors, and seniors) differ from those of the faculty, and of the administrators?

2. To what extent do the perceptions of students differ at high, medium, and low levels of achievement?

3. To what extent do the perceptions of high-affiliated students differ from those of low-affiliated students.

4. To what extent do the perceptions of each class differ from the perceptions of each of the other classes?

The following questions are called subsidiary questions and they involve interaction effects.

1. To what extent do the perceptions of low-affiliated and high-affiliated students differ at high, medium, and low levels of achievement?

2. To what extent do the perceptions of classes differ at high, medium, and low levels of achievement?

3. To what extent do the perceptions of low-affiliated students differ from those of high-affiliated students among the four classes?

4. To what extent do the perceptions of low-affiliated and high-affiliated students within the four classes differ at high, medium, and low levels of achievement?

Definitions of Terms

Two contextual terms frequently used throughout this study are defined here.

> Educational Environment. The characteristics, demands, rewards, behavior, and attitudes of the University community.
>
> Perceptions. The characteristics of the educational environment as perceived by students or other university groups (Pace, 1969).

Basic Assumptions

The first assumption is that all subjects answered the questions on the College and University Environment Scales (CUES) honestly. A second very important assumption involves the treatment of the research data. The data were analyzed with the analysis

of variance statistic which requires that the measures to be analyzed are continuous measures with equal intervals (Kerlinger, 1964). If the assumption of continuous measures with equal intervals is violated, conclusions drawn from the research data of this study would be suspect.

A third assumption is that the two CUES subscales (Campus Morale and Quality of Teaching and Faculty-student Relationships) are, or could be, supported by adequate validity data. Although there is no mention of such data in the CUES technical manual, it appears that both subscales could be supported by validity data since both were developed with the same methodology as were the five original scales.

A fourth assumption is that second-semester freshmen are qualified reporters. Pace (1960) clearly states that freshmen should be excluded from the sample because of their lack of familiarity and experience with the educational environment. The reason for including freshmen in the present study was (1) since they were second semester freshmen, they had had enough exposure to accurately answer the questionnaire, and (2) data on freshmen perception were specifically sought for comparisons purposes.

A fifth assumption is that the reliability of the instrument chosen for this study--the second (1969) edition of College and University Scales--was not lowered significantly by actually administering the first edition (1963) of CUES, and scoring it as if it were the second edition. Apparently a greater degree of task-orientation would be necessary to answer the 150 items of the

first edition than to answer the 100 items of the second edition.

Limitations of the Study

One limitation of the study is that the student samples possibly were not representative of different schools within the University. Student respondents were not asked their college or major department and this factor was not considered in the sampling techniques used. Due to reasons of practicality as well as to lack of cooperation by some other colleges and departments, most students sampled were enrolled in classes of the College of Education, the Department of Management of the College of Business Administration, and the Departments of Psychology and Sociology of the College of Arts and Sciences.

A second limitation is that there may not be a representative balance of men and women in the student samples. Although previous research (McGowan, 1963; Pace, 1963; Webb, 1969) indicates that perceptions of the educational environment are unaffected by sex variables, Pace (1969) suggests a representative sample of men and women. Although both men and women were included in the sample, no attempt at equal representation was made.

A third limitation is that CUES may not depict all areas of agreement or disagreement among various student groups, faculty, and administrators. CUES can only evoke responses to the questions it asks and these all pertain to what already exists in the educational environment. It is possible that various university groups agree on how they perceive the University (which CUES can depict),

but do not agree on how the University should be changed (which CUES cannot depict using standardized administration instructions).

A fourth limitation is that the sample size of 312 (13 observations per cell) for the seven 4 x 3 x 2 analyses of variance may have been so large that negligible associations may not have been excluded from significance. After analysis of the data, a sample size of 96 (4 observations per cell) for a given power of 90 was determined to be sufficient (Kirk, 1968) to detect sigma unit differences of 1.5 between any two treatment means (assuming all other treatment means equal to zero). Therefore, the sample size of 312 might have been excessive.

Summary

The purpose of this study was to examine the educational environment of the University of Oklahoma (defined as the environment's characteristics, demands, rewards, goals, behavior, and attitudes) as perceived by various groups within the University community. The reason for the study is the contemporary problem of higher education stemming from the lack of agreement or congruence between university and student objectives. Although this study has several limitations it was believed that significant findings would aid in the University's effort to clarify educational objectives.

CHAPTER II

REVIEW OF THE LITERATURE

In this chapter, the literature pertinent to this study is reviewed. The review of literature is divided into two sections: (1) theoretical rationale, and (2) instrument rationale.

Theoretical Rationale

Student perception of the educational environment is influenced by the categories of stimuli operating within a particular environmental context (Herr, 1965). An operational view of these categories is defined as "environmental press" (Pace, 1963; Pace & Stern, 1958; Stein, Stern, & Bloom, 1956). The term press delineates the manner in which a student perceives his environment in a uniquely individualistic manner. The concept of press is attributed to the work of Henry Murray in his theorizing about personality (Murray, 1938). A press is part of the environment that represents important determinants of behavior in the environmental context. Student perception of various aspects of the environment determines in part attitudes and behavior toward the educational environment.

A system of interaction constructs was devised from Murray's need-press concepts (Stern, Stein, & Bloom, 1956). Pace

and Stern (1958) devised a systematic measure of institutional environments from this system. Then Stern in 1956 and 1957 developed the Activities Index (AI) and the College Characteristic Index (CCI). The former measures personality using individual need categories, and the latter theoretically is a parallel instrument measuring different aspects of the educational environment. The construction of the CCI is based on the assumption that the composition of environments is similar to the structure of personalities. The CCI scales are the counterpart to the corresponding set of personality need scales of the AI.

However, Pace (1963) criticized these indices on the grounds of data indicating that many of the CCI scales were not actual counterparts to correspondingly labeled personality need scales, and that the organization of environments was different in many respects from the organization of personalities. Consequently, the College and University Environment Scales (CUES) was developed by Pace (1963) to directly study college and university environments in their own right.

An important theoretical consideration in the measurement of educational environments is the difference in the conceptualization of the opinion-polling or collective-perception rationale as opposed to the more familiar individual difference rationale of educational and psychological testing (Pace, 1963). The point is that it is theoretically possible to measure the educational environment separately from personality. On any scale attempting to measure the educational environment, the unit of scoring should

be the item, and not the individual (Pace, 1969).

There is empirical evidence to suggest that the dimensions of environments are not similar to the dimensions of personalities. Two studies (Brawer, 1963; McFee, 1961) were reported in which the personality characteristics of reporters were compared with their perceptions of the college environment. The findings of these studies showed that there were no significant correlations between the personality characteristics of reporters and their perceptions of the college environment. From the findings of these studies, as well as his own, Pace (1963) concluded that personal characteristics of reporters such as sex, scholastic aptitude, or personality measures, have little bearing or influence on the perceptions of environmental characteristics.

Herr (1965) used the High School Characteristics Index (HSCI), which was derived from the CCI, to measure high school student perception of the educational environment. Students were classified by achievement level and extracurricular activities. Other variables such as intelligence, type of grammar school previously attended, father's occupation, and parental level also were controlled. The findings showed that student responses to the items of the HSCI could provide descriptions of the environmental demands faced by students. Findings also suggest that social experiences, achievement, and environmental perceptions combine to influence institutional behavior.

In contrast to Herr's study, Pace (1966b) used CUES and showed that the educational environment was unaffected by achieve-

ment variables. Low-achievers and high-achievers did not perceive the environment differently in the scholarship dimension. The contradictory findings for the achievement variable may be due to the nature of the instrument used in each study.

Webb (1967) analyzed the educational environment on the basis of school and race in the primary grades. Pupils perceived the environment differently when classified by school and race than when compared by sex or levels of achievement. Although press patterns appeared when students were classified by levels of achievement, the findings were not statistically significant. There was no specific difference in the perceptions of males or females. McGowan (1963) also showed that sex differences were generally nonexistent in the measurement of the educational environment. Using CUES, he found small differences on the Community scale, but there were no significant differences in any of the groups' responses on the other scales. In keeping with the findings of McGowan (1963) and Webb (1967), Pace (1963) found small and insignificant differences on the CUES scales.

Astin (1965) studied the relationship between the college environment and vocationally related educational decisions using National Merit Scholars at 73 institutions. Using Holland's classification of "personal orientations," students were classified as to size of the student-body, ability level of students, and student homogeneity. At the time of graduation student vocational choices were reinforced by the atmosphere of the institution. Thistlewhite (1959) studied the educational environment in

connection with vocational choice on college campuses. Students classified in the physical, natural, and biological sciences, reacted differently to the rewards and demands of their educational environment than students classified in the social sciences, arts, and humanities. Different faculty behavior was instrumental in stimulating students to pursue graduate work in either of these vocational orientations.

McKeachie, Y-Guang, Milholland, & Isaacson (1966) showed that teacher effectiveness depends in part on the characteristics of students. Testing the hypothesis that affiliation cues would interact with "n" affiliation in determining achievement, the findings were that men high in "n" affiliation made relatively better grades in classes characterized by high levels of affiliation cues. Men low in "n" affiliation performed better in classes low in affiliation cues.

Boyer (1967) also studied the affiliation variable. He found that the degree of affiliation had a mediating effect between social and academic performance variables of college freshmen peer groups. When acceptance and respect for affiliated peer group members were high, academic performance also was high. When these conditions were reversed, academic performance was low. Other findings were that the school's environmental press for achievement was frequently in conflict with student needs for affiliation.

Graves (1958) pointed out that increasing student population heterogeneity has resulted in increased concern over the characteristics of college students. Findings of his study showed

that student needs determined conditions under which academic success was achieved. Students with strong affiliation needs did better in a teacher-centered classroom. Graves concluded that a particular class structure is not equally good for each student. In another affiliation study, Chambers, Jay, Wilson & Winston (1968) studied the relationship between religious and nonreligious affiliation. Need characteristics of affiliated college freshmen differed from those of unaffiliated freshmen, in that the latter apparently had more adjustment problems. Unaffiliated students' problems focused on needs to be independent, nonconforming, and somewhat irresponsible.

In studies dealing with personality and "environmental press," McFee (1961) designed a study to see if personality characteristics correlated with student perceptions of the educational environment. No significant correlations were found between student scores on the Activities Index and the correspondingly labeled scales of the College Characteristics Index. Brawer (1963) also showed that the correlations were low between personality characteristics and the perceptions of the educational environment.

In studies dealing with the perceptions of various university groups and "environmental press," Stern (1966) gave the College Characteristics Index (CCI) to 3075 freshmen enrolling in four colleges. Their responses to the CCI showed that they had unusually high expectations about college life. From the findings of his study, Stern concluded that freshman expectations about college life are enthusiastic and idealistic, but highly unrealistic

and naive.

In a study conducted by Pace (1966a), the findings showed that freshmen scored higher on CUES in most cases than sophomores, juniors, or seniors. He also concluded that freshmens' perceptions were idealistic but unrealistic, and attributed their higher scores to their lack of experience with the college environment. In the same study, Pace found that sophomores typically scored higher than juniors and seniors on several of the CUES scales, notably on the Scholarship scale. In another study, Pace (1966c) compared the perceptions of faculty with those of upperclassmen or of sophomores from sixteen institutions. He found that the faculty typically scored higher on CUES than the students, but gave no explanation of these findings.

Instruments and Research Rationale

Three instruments were used to collect the data: (1) a "Face Sheet" requesting personal information (Appendix A) (2) a checklist of 117 campus organizations on which students were to indicate their memberships (Appendix B) (3) the College and University Environment Scales, used to assess students' perceptions of the educational environment (Appendix C).

The second (1969) edition of CUES was used for this study. Because copies of the first (1962) edition were readily available from the University of Oklahoma Counseling Center, the first edition was actually administered to subjects, but was scored as if it were the second edition. This was possible because

the first edition includes among its 150 items all 100 items contained in the second edition plus an additional 50 items omitted in the second edition. Only those 100 items included in the second edition were scored on the answer sheets, although subjects responded to all 150 items. (See Appendix D for list of item numbers scored on the first edition and their corresponding numbers on the second edition). A brief description of the test and its purposes, description of the scales, and reliability and validity data follow.

CUES consists of 100 items about college life--features and facilities of the campus, rules and regulations, faculty, curricula, instruction and examination, student life, extracurricular organizations, and other aspects of the institutional environment defining the intellectual, social, and cultural climate as subjects see it. Items are answered "true" when subjects think they reflect a general characteristic of the university, and answered "false" when subjects think that they do not (Pace, 1969).

CUES is specifically designed to assess the characteristics of colleges and universities. It was chosen instead of the Activities Index (AI) and its corresponding counterpart, the College Characteristics Index (CCI), because evidence suggests that the AI and CCI are not entirely parallel instruments. Their rationale is based on the assumption that the composition of environments is parallel with the structure of personalities. The rationale of CUES is not based on this assumption. Saunders

(1962) analyzed the strategy for comparing AI-CCI relationships. The findings of his factor analytic study showed that except for the intellectual needs factor and the intellectuality of the environments, each instrument produced its own unique set of factors. It was concluded that the two instruments are not entirely parallel.

A brief description of the five scales (Practicality, Community, Awareness, Propriety, and Scholarship) and two subscales (Campus Morale, and Quality of Teaching and Faculty-Student Relationships) follows:

> Scale I. Practicality. This combination of items suggests a practical, instrumental emphasis in the college environment. Procedures, personal status, and practical benefits are important. Status is gained by knowing the right people, being in the right groups, and doing what is expected. Order and supervision are characteristic of the administration and of the classwork.
>
> Scale 2. Community. The combination of items in this scale describes a friendly, cohesive, group-oriented campus. The environment is supportive and sympathetic. There is a feeling of group welfare and group loyalty which encompasses the college as a whole. The campus is a community. It has a congenial atmosphere. A friendly and helpful relationship characterize student and faculty.
>
> Scale 3. Awareness. The items in this scale seem to reflect a concern and emphasis upon three sorts of meaning-personal, poetic, and political. An emphasis upon self-understanding, reflection, and identity suggest the search for personal meaning. A wide range of opportunities for creative and appreciative relationships to painting, music, drama, poetry, sculpture, architecture, etc., suggest the search for poetic meaning. A concern about events around the world, the welfare of mankind, and the present and future condition of man suggest the search for political meaning and idealistic commitment. What seems to be evident in this sort of environment

is a stress on awareness, an awareness of self, of society, and esthetic stimuli.

Scale 4. Propriety. The items in this scale suggest an environment that is polite and considerate. Caution and thoughtfulness are evident. Group standards of decorum are important. On the negative side, one can describe propriety as the absence of demonstrative, assertive, rebellious, risk-taking, inconsiderate, convention-flouting behavior.

Scale 5. Scholarship. The items on this scale describe an academic enviornment that is scholarly. The emphasis is on competitively high academic achievement and a serious interest in scholarship. The pursuit of knowledge and theories, scientific or philosophical, is carried on rigorously and vigorously. Intellectual speculation, an interest in ideas as ideas, knowledge for its own sake, and intellectual discipline---all these are characteristic of the environment.

Subscales:

Scale 6. Campus Morale. The items in this scale describe an environment characterized by acceptance of social norms, group cohesiveness, friendly assimilation into campus life, and, at the same time, a commitment to intellectual pursuits and freedom of expression. Intellectual goals are exemplified and widely shared in an atmosphere of personal and social relationships that are both supportive and spirited.

Scale 7. Quality of Teaching and Faculty-Student Relationships. The items on this scale describe general satisfaction with teachers who are thorough, dedicated scholars setting high standards, clearly explaining the goals of their courses, frequently revising course materials, having vigorous class discussion, and not expecting students to wait to be called on before speaking in class. In their relationships with students they call them by their first names, are interested in their personal problems, go out of their way to be helpful, and are not swayed by personality, bluff, or pull (Pace, 1969).

The reliability estimates for each scale are based upon

Cronbach's coefficient alpha. These reliability estimates range from .89 to .94 (Pace, 1969). Estimating the reliability coefficients computed by the standard methods (split-halves, Kuder-Richardson, test-retest) for different groups within a university is inappropriate, since these coefficients are based upon a wide dispersion of scores. A high degree of consensus among respondents, or a low variance in the distribution of scores, is a desired result for different groups within a university. The standard error of a proportion statistic provides an indication of the limits within which the true proportion lies (Pace, 1963). The reliability of a group's score with an institution on any of the scales is a function of the size of the sample and of the number of items answered in the keyed direction.

CUES had concurrent validity (Pace, 1969) when correlations between CUES scores and institutional features are computed. Pace (1969) lists validity data only for the five scales and not for the two subscales.

The Practicality Scale is negatively related to academic criteria such as mean SAT-V scores of admitted freshmen (-.74). This scale also is associated negatively with several environmental variables with scholastic implications: excellent classroom teaching (-.42), excellent facilities for research (-.37) excellent calibre of students (-.54), and excellent faculty (-.62).

The Community Scale is negatively related to percentage of faculty with Ph.D.'s (-.28). It is also negatively related to the number of entering students who have realistic vocational

choices and to the proportion of men in the entering class (-.52), and negatively related to excellent facilities for research (-.39). It is positively related to percent of degrees in such fields as Fine Arts, Languages, and Music (.24).

The Awareness scale is positively related to mean SAT-V scores of admitted freshmen (.53), and to the mean NMSQT score for 41 of 100 schools in the CUES sample (.41). It is also negatively related to the number of entering students who have realistic vocational choices and to the proportion of men in the entering class (-.29). It is positively related to SAT mathematics scores and interest in science (.28).

The Propriety scale is correlated negatively with SAT mathematics scores and interest in science of incoming freshmen (-.33), and positively related to the number of awards won in high school for art, music, and writing, of incoming college freshmen (.18). It is also negatively related to excellent facilities for research (-.51).

The Scholarship scale is positively related to excellent classroom teaching (.59), excellent facilities for research (.42), excellent calibre of students (.68), and excellent faculty (.67). It is also positively related to SAT Mathematics scores and interest in science (.60), and the occupational and economic level of the student's family (.25).

Summary

In summary, it was noted that the perception of the

educational environment is unaffected by sex variables (McGowan, 1963; Webb, 1967), but apparently is moderated by social experiences (Herr, 1965), school affiliation (Webb, 1967), and vocational orientation (Thistlewhite, 1960; Astin, 1965). Because the findings are inconsistent (Herr, 1965; Pace, 1963; Webb, 1967), it presently is not possible to determine the effects of the achievement variable upon the educational environment. Other variables appear to interact with the affiliation variable in its effects upon achievement. Studies showed that academic success is related not only to affiliation, but to classroom orientation (McKeachie, et al., 1966, Graves, 1958), social variables (Boyer, 1967), and possibly religious affiliation or non-religious affiliation (Chambers, et al., 1968). Other findings showed that freshmens' perceptions are idealistic but unrealistic (Pace, 1966; Stern, 1966), and that faculty have a higher "environmental press" score than students.

Pace (1963) theorized that educational environments can be measured in their own right with some degree of objectivity (Pace, 1963). CUES was chosen for this study because it does not assume that the composition of environments is parallel with the structure of personalities.

CHAPTER III

DESIGN AND STATISTICAL METHODOLOGY

This study examined the educational environment of the main campus of the University of Oklahoma (defined as the environment's characteristics, demands, rewards, goals, behavior, and attitudes) as perceived by various groups within the University community. The perceptions of the educational environment by class levels of students (freshmen, sophomores, juniors, and seniors) were compared to those of faculty and administrators. In addition to comparing the perceptions of the educational environment by class levels of students, the perceptions of students by classes were compared on the basis of high affiliation or low affiliation, and on three levels of high, medium, and low achievement. Also, perceptions of high-affiliated students were compared to those of low-affiliated students. In addition to comparing the perceptions of both high and low-affiliated students, perceptions of students at each of three levels of achievement (high, medium, and low) were compared to those of students at each of the other levels of achievement. Also, the perceptions of high-affiliated and low-affiliated students were compared at each level of achievement. Further refinements were made by comparing the perceptions of classes concurrently on the basis of high affiliation or low

affiliation at each level of achievement.

Subjects

Two student samples were drawn from the freshman, sophomore, junior, and senior classes at the University of Oklahoma. The first sample consisted of 78 students from each of the four classes for a total of 312; the second consisted of 26 from each of the four classes for a total of 104. All student subjects were full-time (enrolled in 12 or more credit hours) undergraduates during the 1970 spring semester who had attended the University of Oklahoma for at least one semester previous to that. Thus the sample excluded first-semester freshmen and transfer students in their first semester at Oklahoma University.

A faculty sample of 26 permanent full-time teaching employees (instructors, assistants, associates, and full-professors) was drawn from the seven degree-granting colleges on the main campus of the University of Oklahoma. All faculty sampled were required to have had at least one semester's previous teaching experience on the University's main campus.

An administrator sample of 26 was taken from a list entitled "Administrative Officers" prepared by the Secretary of the Board of Regents of the University of Oklahoma. All administrators sampled held positions related to activities on the main campus. They included, among others, vice-presidents and deans of various colleges on the main campus.

Procedure

The researcher requested permission of faculty members from the Departments of Psychology, Sociology, and Management, and the College of Education to administer CUES to some of their classes. With their consent the researcher or an assistant tested various classes on scheduled dates. Also, with consent of dormitory counselors, the researcher tested dormitory residents during their weekly meetings. Each student tested was provided with a CUES questionnaire, an IBM answer sheet, a "Face Sheet," a checklist of student organizations, and a number 2 pencil. The purpose of the study was presented to the students to enhance participation (Appendix E). Students were then read specific instructions on how to fill out the "Face Sheet," campus organization checklist, and CUES (Appendix F).

Of the 678 students tested, 63 did not qualify for inclusion in the sample by being full-time (enrolled in 12 or more credit hours) undergraduates during the 1970 spring semester who had attended the University of Oklahoma for at least one semester previous to that. The cumulative grade point averages for 44 others were unobtainable, leaving a remainder of 571 usable answer sheets from which the two student samples could be drawn. Graduate students and unclassified students were not used in this study.

All student subjects were classified as either high-affiliated or low-affiliated on the basis of the relationship of their affiliation scores (number of organizations in which they

indicated membership on the checklist and "Face Sheet") to the median affiliation score. The median, midpoint of the distribution of all student affiliation scores ranked from high to low, was .936 or 1.0, rounded to the nearest whole number. The range was from 0 to 15. The 201 students whose affiliation scores were greater than the median score, 1.0, were classified as high-affiliated and the 221 whose scores were zero were classified as low-affiliated. In order to place the remaining 149 answer sheets with affiliation scores of 1.0 in one of the two categories and at the same time approximately equalize the two categories, 65 of the 149 answer sheets with scores of 1.0 were randomly chosen to be added to the 221 already in the low-affiliation category. The remaining 84 were added to the high-affiliation category. This gave an N of 286 in the low-affiliation category, and approximately equal N of 285 in the high-affiliation category, and a total N of 571 for both categories. The 65 answer sheets added to the low-affiliation category included a proportionate number from each of the four classes (freshman, sophomore, junior, and senior). The number chosen from each class was based upon the number of answer sheets in each relative to the total number of 149. The method used to choose answer sheets with affiliation scores of 1.0 was to consecutively number answer sheets from each class separately and choose the required number by use of a table of random numbers (Rand Corporation, 1955).

The division of the student sample of 571 answer sheets, already divided into four class and two affiliation groups, into three groups of high, medium, and low achievers was accomplished

by ranking the grade point averages of the entire sample from low to high (range 0.33 to 4.00) and dividing the ranked GPAs into three approximately equal groups. The grade point averages, which included work done at previous colleges and at the University of Oklahoma, were obtained from the Records Office. Only grades of A, B, C, D, F, and WF were included in the computation of averages. Neutral grades of S, U, W, I, and P were omitted. In computing the GPAs, one hour of A was worth four points, B three points, C two points, D one point, and F zero points. The first group, designated "low achievers," included answer sheets ranked from 1 to 191 with GPAs ranging from 0.33 to 2.40. The second group, designated "medium achievers," included answer sheets ranked from 192 to 381 with GPAs ranging from 2.40 to 2.95. The third group, designated "high achievers," included answer sheets ranked from 382 to 571 with GPAs ranging from 2.95 to 4.00. The method used to choose answer sheets with GPAs of 2.40 and 2.95 was to consecutively number each group separately and choose the required number for the appropriate categories by use of a table of random numbers (Rand Corporation, 1955).

The 571 student answer sheets, coded for distribution, were placed among the 24 cells of the 4 x 3 x 2 analysis of variance on the basis of class (freshman, sophomore, junior, or senior), achievement (high, medium, or low) and affiliation (high or low). After distribution the cells contained unequal numbers of answer sheets (see Table 1).

In order to equalize the sizes of the 24 cells (according to Edwards (1960), the F test with equal n's is very insensitive to variance inequalities), each had to be reduced to 13, the

Table 1

Distribution of 571 Student Answer Sheets on the Basis of Class (Freshmen, Sophomore, Junior, or Senior), Achievement (High, Medium, or Low) and Affiliation (High or Low)

AFFILIATION	ACHIEVEMENT	CLASS				
		Freshmen	Sophomore	Junior	Senior	Tot.
Low	High	15	25	27	13	80
	Medium	18	14	25	26	83
	Low	37	29	29	28	123
High	High	29	38	22	21	110
	Medium	21	35	22	29	107
	Low	21	13	14	20	68
						571

size of the smallest cell. Consequently a total of 259 answer sheets had to be removed from 22 of the 24 cells. To accomplish this reduction, all answer sheets within each of the 22 cells were consecutively numbered and the required number of them eliminated from each cell by use of a table of random numbers (Rand Corporation, 1955). After reduction, 312 answer sheets (13 in each of the 24 cells) remained as the size of the student sample for seven 4 x 3 x 2 analyses of variance. A sample size of 312 (13 observations per cell) for a given power of 90 was determined to be more than sufficient to detect sigma unit differences of 1.5 between any two treatment means (assuming all other treatment means equal to zero). The intersection of the phi line 9.37 with numerator df of five and denominator df of 288 set at infinity fell above the limit specified by the power chart (Kirk, 1968), indicating that the power of the statistical test to find the stipulated differences would be greater than .999 at the .01 level.

Of the 259 removed answer sheets, 63 were freshmen, 76 sophomores, 61 juniors, and 59 seniors. A second student sample of 104 answer sheets, 26 from each of the four classes, was drawn from these. The method used for drawing the sample was to consecutively number answer sheets from each class separately and choose a subsample of 26 from each class by use of a table of random numbers (Rand Corporation, 1955). The four student subsamples of 26 each (freshmen, sophomores, juniors, and seniors) together with a faculty subsample of 26 and an administrator subsample of 26 comprised the data for seven 1 x 6 analyses of variance. The

size of these subsamples was determined by the smallest number of usable questionnaires returned by any one of the six groups. Since the smallest number of returns was from the administrators, who returned 26 questionnaires, 26 became the size of the six subsamples for the seven 1 x 6 analyses of variance. A sample size of 156 (26 observations per cell) for a given power of 90 was determined to be more than sufficient to detect sigma unit differences of 1.5 between any two treatment means (assuming all other treatment means equal to zero). The intersection of the phi line 4.5 with numerator df of three and denominator df of 150 set at infinity fell above the limit specified by the power chart (Kirk, 1968), indicating that the power of the statistical test to find the stipulated differences would be greater than .999 at the .01 level.

The sample of administrators was drawn from a list prepared by the Board of Regents of 52 administrative officers associated with main campus activities. In order to insure a minimum sample size of 20, a return of approximately 50% being expected, 45 questionnaires were distributed. Administrators selected were those who indicated a willingness to fill out the questionnaire anonymously if they had the time. Either the researcher or an assistant familiar with the study personally contacted each of the 45 administrators selected (or his secretary) and asked that he cooperate by completing the CUES questionnaire IBM answer sheet and returning it within approximately two weeks. Packets were distributed to administrators which contained, in addition to the

IBM answer sheet, a CUES questionnaire booklet, a faculty exchange envelope, a letter of instruction (Appendix G), and a copy of a letter explaining the purpose of the study (Appendix H). Of the 45 questionnaires distributed, 34 were returned answered, three were returned unanswered, and eight were not returned. Of the 34 questionnaires returned completed, eight were eliminated from the sample because those administrators held positions not related to main campus activities, which was not discovered until after the questionnaires had been returned. This left 26 as the size of the administrator sample.

Faculty members were sampled from the seven degree-granting colleges on the main campus of the University of Oklahoma (Arts & Sciences, Business Administration, Education, Engineering, Fine Arts, Law, and Pharmacy). According to a list provided by the Office of the Provost of the rank and number of teaching staff of all the departments and colleges, there was 567 permanent teaching employees (instructors, assistants, associates, and full professors) and 420 temporary teaching employees (graduate, teaching, and research assistants; special instructors; visiting and adjunct professors of assistant, associate, and full rank) for a total teaching staff of 987.

The researcher or an assistant familiar with the study personally contacted the secretaries of 16 of the 26 departments of the College of Arts & Sciences, five of the six departments of the College of Business Administration, the College of Engineering, the three departments of the College of Fine Arts, and the Colleges

of Law and Pharmacy and requested their help in choosing permanent faculty members within their departments or colleges who had had at least one semester of teaching experience on the main campus of the University of Oklahoma and might be willing to anonymously answer the CUES questionnaire. On several occasions secretaries directed the researcher to offices of faculty members, so that he might personally request their participation. To chosen faculty members not personally contacted by the researcher, the secretaries gave the packets, requesting them to complete the answer sheets and return them with the CUES questionnaire booklets. The researcher also distributed packets to those faculty members he contacted personally who agreed to participate.

To insure a minimum sample size of 20 to represent the 567 permanent faculty members on the main campus, a return of approximately 25% being expected, 77 questionnaires were distributed. Forty-three of them were returned, three of which had not been answered.

Thirty-seven questionnaires were given to faculty members in 16 of the 26 departments of the College of Arts & Sciences--four to Botany & Microbiology faculty members, two to Chemistry, one to Classics, two to English, two to Geography, three to Geology, four to History, two to Mathematics & Astronomy, two to Modern Languages, two to Philosophy, two to Physics, four to Political Science, two to Psychology, one to Social Work, three to Sociology, and one to Speech. Of these 37 questionnaires, 16 were returned answered by faculty members of 10 of the 16 departments--one from

Botany & Microbiology, two from Chemistry, two from Geology, four from History, two from Mathematics & Astronomy, one from Modern Languages, one from Philosophy, one from Social Work, one from Sociology, and one from Speech. The remaining six departments did not return any answered questionnaires. Three questionnaires were returned unanswered -- one from English, one from Geography, and one from Geology.

Six questionnaires were given to faculty members in five of the six departments of the College of Business Administration -- one to an Accounting faculty member, one to Business Management, two to Economics, one to Finance, and one to Marketing. Of these six questionnaires, three were returned answered by faculty members of three of the six departments -- one from Accounting, one from Economics, and one from Business Management. The remaining two departments did not return any answered or unanswered questionnaires.

Fourteen questionnaires were given to faculty members in six of the nine departments of the College of Egnineering -- four to Aerospace & Mechanical Engineering faculty members, two to Chemical Engineering & Materials Science, three to Civil Engineering & Environmental Science, two to Electrical Engineering, and one to Petroleum Engineering. Of these 14 questionnaires, nine were returned answered by faculty members of four of the six departments -- four from Aerospace & Mechanical Engineering, one from Civil Engineering & Environmental Science, two from Electrical Engineering, and two from Industrial Engineering. The remaining

two departments did not return any questionnaires.

Four questionnaires were given to faculty members of the College of Education. All four were returned answered.

Nine questionnaires were given to faculty members in the three departments of the College of Fine Arts -- three to Art Faculty members, two to Drama, and four to Music. Of these nine questionnaires, seven were returned answered -- two from Art, four from Drama, and one from Music. Two questionnaires were not returned.

Four questionnaires were given to faculty members of the College of Law. All four were returned answered.

Two questionnaires were given to faculty members of the College of Pharmacy. Both were returned answered.

A sample of size 26, equal to the size of the administrator and student subsamples for the 1 x 6 analysis of variance, was then drawn from among the 40 answer sheets returned completed by permanent faculty members. The number of faculty allowed in the sample from any college was proportionate to the ratio of permanent faculty members in that college to the total number (567) of permanent faculty members on the main campus. Since the College of Arts & Sciences had 54.67% of the total faculty, 54.67% of the required sample of 26, or 14, rounded to the nearest whole number, was the number of answer sheets required to represent that college. The College of Business Administration had 7.93% of the total faculty; therefore 7.93% of the required sample of 26, or two, rounded to the nearest whole number, was the number of answer

sheets needed to represent that college. The College of Education had 5.46% of the total faculty; therefore 5.46% of the required sample of 26, or one, rounded to the nearest whole number, was the number of answer sheets needed to represent that college. The College of Engineering had 17.10% of the total faculty; therefore 17.10% of the required sample of 26, or four, rounded to the nearest whole number, was the number of answer sheets needed to represent that college. The College of Fine Arts had 9.87% of the total faculty; therefore 9.87% of the required sample of 26, or three, rounded to the nearest whole number, was the number of answer sheets needed to represent that college. The College of Law had 3.25% of the total faculty; therefore 3.25% of the required sample of 26, or one, rounded to the nearest whole number, was the number of answer sheets needed to represent that college. The College of Pharmacy had 1.58% of the total faculty; 1.58% of the required sample of 26 was 0.41, less than one when rounded to the nearest whole number. In order to represent all seven colleges, however, one answer sheet from Pharmacy was included in the faculty sample. The method used for drawing the sample was to consecutively number answer sheets from each college separately and, by use of a table of random numbers (Rand Corporation, 1955), eliminate from each college those in excess, if any, of the number needed to represent that college.

Statistical Treatment

In order to investigate the first primary question regarding

comparisons of the perceptions of each of the four class groups (freshman, sophomore, junior, and senior) with those of the administrator group and of the faculty group, the F ratio for a 1 x 6 (groups) randomized analysis of variance (Edwards, 1960) was calculated for the six groups on each of the seven CUES scales.

To investigate primary questions two through four, and the four secondary questions, a 4 x 3 x 2 (classes x achievement x affiliation level) complete factorial design with equal replications analysis of variance (Edwards, 1960) was used with four levels representing the class factor, three levels the achievement factor, and two levels the affiliation factor, for each of the seven CUES scales.

Each primary question (with the exception of question one) and each secondary question corresponded with one of the seven component parts of the sum of squares of the 4 x 3 x 2 analysis of variance on each CUES scale. The primary questions two, three, and four corresponded with one of the three component main effects (classes, achievement, and affiliation). The secondary questions one through four corresponded with one of the four component interaction effects of the 4 x 3 x 2 analysis of variance on each CUES scale.

In investigating the extent to which the perceptions of students differed at high, medium, and low levels of achievement, the F ratio for the achievement main effect was calculated on each of the seven CUES scales.

In investigating the extent to which the perceptions of

high-affiliated students differed from those of low-affiliated students, the F ratio for the affiliation main effect was calculated on each of the seven CUES scales.

In investigating the extent to which the perceptions of each class differed from the perceptions of each of the other classes, the F ratio for the class main effect was calculated on each of the seven CUES scales.

In investigating the extent to which the perceptions of low-affiliated and high-affiliated students differed at high, medium, and low levels of achievement, the F ratio for the affiliation x achievement two-way interaction was calculated on each of the seven CUES scales.

In investigating the extent to which the perceptions of classes differed at high, medium, and low levels of achievement, the F ratio for the class X achievement two-way interaction was calculated on each of the seven CUES scales.

In investigating the extent to which the perceptions of low-affiliated students differed from those of high-affiliated students among the four classes, the F ratio for the affiliation X class two-way interaction was calculated on each of the seven CUES scales.

In investigating the extent to which the perceptions of low-affiliated and high-affiliated students within the four classes differed at high, medium, and low levels of achievement, the F ratio for the affiliation X class X achievement three-way interaction was calculated on each of the seven CUES scales.

Post-hoc comparisons and an analysis of simple-simple main effects were used when appropriate. The minimum for the determination of a significant finding was set at the .05 level.

CHAPTER IV

RESULTS

In this section are analysed on the seven CUES scales the responses of a sample (N = 156) of six groups (freshmen, sophomores, juniors, seniors, administrators, and faculty) to items of the CUES questionnaire. The data provide a description of the educational environment as perceived by each of the six groups. The method used to analyse the data was the randomized group design analysis of variance (Edwards, 1960). One analysis was used for each of the seven CUES scales.

Analysis of Class, Faculty, and Administrator Perceptions

One purpose of the present study (principal question one) was to investigate to what extent the perceptions of each of the four classes differed from those of the faculty and those of the administrators. In order to investigate this question, the perceptions of the six groups were compared on each of the seven CUES scales by the analysis of variance statistic. The analysis revealed that the group factor was not significant ($p > .05$) on the CUES Practicality scale (Scale 1), Community scale (Scale 2), Awareness scale (Scale 3), Propriety scale (Scale 4), Scholarship scale (Scale 5), and Campus Morale scale (Scale 6). The analyses

of variance for these six scales are summarized in Tables 2, 3, 4, 5, 6, and 7 respectively. The group factor was significant ($p < .05$) on the Quality of Teaching and Faculty-student Relationships scale (Scale 7). Table 8 summarizes the analysis for this scale. The significant F value indicates a difference in the perceptions of the educational environment among the six groups on the Quality of Teaching and Faculty-student Relationships scale.

Post-hoc comparisons of class, faculty and administrator perceptions. Tukey's (a) procedure (Winer, 1962) was used to make post-hoc pairwise comparisons between all means of the six groups on the Quality of Teaching and Faculty-student Relationships scale. This procedure was chosen because it keeps the Type I error small and has relatively greater power in respect to other post-hoc comparisons (Petrenovich and Hardyck, 1969). Pairwise comparisons between all mean scores are reported in Table 9. The mean score for sophomores was significantly higher ($p < .05$) than the mean score for freshmen. All other pairwise comparisons were not significant.

Emphasis of agreement among the six groups. Although there was a difference between the perceptions of two of the four classes-freshman and sophomore-on the Quality of Teaching and Faculty-student Relationships scale, none of the classes' perceptions differed from those of the faculty or administrators on any CUES scale. This indicated consensus or agreement on every scale. In order to determine the emphasis of agreement on any scale, cut-off points were established for three categories. The

Table 2

Analysis of Variance Comparing the Perceptions of Six Groups (Freshman, Sophomore, Junior, Senior, Faculty, and Administrator) on the CUES Practicality Scale

Source	df	MS	F	P
Groups	5	4.06	0.64	NS
Error	150	6.28		

Table 3

Analysis of Variance Comparing the Perceptions of Six Groups (Freshman, Sophomore, Junior, Senior, Faculty, and Administrator) on the CUES Community Scale

Source	df	MS	F	P
Groups	5	23.93	2.26	NS
Error	150	10.56		

Table 4

Analysis of Variance Comparing the Perceptions of Six Groups (Freshman, Sophomore, Junior, Senior, Faculty, and Administrators) on the CUES Awareness Scale

Source	df	MS	F	P
Groups	5	13.25	0.64	NS
Error	150	20.44		

Table 5

Analysis of Variance Comparing the Perceptions of Six Groups (Freshman, Sophomore, Junior, Senior, Faculty, and Administrators) on the CUES Propriety Scale

Source	df	MS	F	P
Groups	5	8.88	1.49	NS
Error	150	7.73		

Table 6

Analysis of Variance Comparing the Perceptions of Six Groups (Freshman, Sophomore, Junior, Senior, Faculty, and Administrator) on the CUES Scholarship Scale

Source	df	MS	F	P
Groups	5	30.22	1.59	NS
Error	150	18.92		

Table 7

Analysis of Variance Comparing the Perceptions of Six Groups (Freshman, Sophomore, Junior, Senior, Faculty, and Administrator) on the CUES Campus Morale Scale

Source	df	MS	F	P
Groups	5	21.17	1.24	NS
Error	150	17.00		

Table 8

Analysis of Variance Comparing the Perceptions of Six Groups (Freshman, Sophomore, Junior, Senior, Faculty, and Administrator) on the Quality of Teaching and Faculty-Student Relationships Scale

Source	df	MS	F	P
Groups	5	16.79	2.98	$<.05$
Error	150	5.63		

Table 9

Tukey's (a) Test for Six Pairwise Comparisons for Differences Between Groups on the CUES Quality of Teaching and Faculty-student Relationships scale

		Fresh. $\bar{X}$ 3.65	Sen. $\bar{X}$ 4.00	Admin. $\bar{X}$ 4.73	Fac. $\bar{X}$ 5.26	Jun. $\bar{X}$ 5.42	Soph. $\bar{X}$ 5.61
Fresh.	$\bar{X}$ 3.65		0.35	1.08	1.61	1.77	1.96*
Sen.	$\bar{X}$ 4.00			0.73	1.26	1.42	1.61
Admin.	$\bar{X}$ 4.73				0.53	0.69	0.88
Fac.	$\bar{X}$ 5.26					0.16	0.35
Jun.	$\bar{X}$ 5.42						0.19
Soph.	$\bar{X}$ 5.61						

*$p < .05$

cut-off points were used to determine whether the emphasis of agreement was strong, moderate, or weak. Cut-off points were calculated by taking the distance of 2.58 standard error units and multiplying it on each side of the expected mean of each CUES scale by the standard error of the mean for that scale. To protect against Type I errors, the alpha level for the seven comparisons (one per scale) was set at the .01 level of significance so that the probability of making a Type I error would not exceed the .068 level over all comparisons made (Reynolds, undated). The agreement was strongly emphasized on the Practicality and Awareness scales, while moderately emphasized on the Community, Propriety, Scholarship, Campus Morale, and Quality of Teaching and Faculty-student Relationships scales.

Analysis of Students' Perceptions by Class, Achievement, and Affiliation

In this section data from the seven CUES scales the responses of students (N = 312) to items on the CUES questionnaire are presented. As described in chapter three, all students were classified by class level (freshman, sophomore, junior, or senior), by level of achievement (high, medium, or low), and by affiliation category (high or low). Each of the seven (one for each of the CUES scales) 4 x 3 x 2 (class X achievement X affiliation category) complete factorial design with equal replications analyses of variance (Edwards, 1960) had four levels representing the class factor, three levels the achievement factor, and two levels the affiliation

factor.

Analysis of Students' Perceptions at Different Levels of Achievement

The second principal question investigated was the degree to which the perceptions of students differ at high, medium, and low levels of achievement. The achievement main effect, which corresponds to this question was significant on the Practicality scale ($p < .025$). The F value for the significant achievement main effect on the Practicality scale is shown in Table 10. The F value for the achievement main effect was not significant ($p > .05$) on scales two through seven (Community, Awareness, Propriety, Scholarship, Campus Morale, and Quality of Teaching and Faculty-student Relationships). The nonsignificant F values for the achievement main effect on these six scales are shown in Tables 11, 12, 13, 14, 15 and 16 respectively.

Post-hoc comparisons for the achievement main effect. Post-hoc pairwise comparisons between all mean scores for the significant achievement main effect on the Practicality scale were made using Tukey's (a) procedure (Winer, 1962). Pairwise comparisons between all mean scores are reported in Table 17. The mean score for low-achievers was significantly ($p < .05$) higher than the mean score for high-achievers. All other pairwise comparisons were not significant.

Table 10

Analysis of Variance for Achievement, Affiliation and Class on the CUES Practicality Scale

Source	df	MS	F	P
Achievement	2	34.51	5.34	< .025
Affiliation	1	15.25	2.36	NS
Class	3	2.83	< 1.00	NS
Affil. X Ach.	2	1.65	< 1.00	NS
Class X Ach.	6	3.54	< 1.00	NS
Affil. X Class	3	0.22	< 1.00	NS
Affil. X Class X Ach.	6	6.10	< 1.00	NS
Error	288	6.14		

Table 11

Analysis of Variance for Achievement, Affiliation and Class on the CUES Community Scale

Source	df	MS	F	P
Achievement	2	2.04	< 1.00	NS
Affiliation	1	1.15	< 1.00	NS
Class	3	23.78	2.35	NS
Affil. X Ach.	2	0.19	< 1.00	NS
Class X Ach.	6	11.02	2.13	NS
Affil. X Class	3	7.69	< 1.00	NS
Affil. X Class X Ach.	6	8.73	< 1.00	NS
Error	288	10.10		

Table 12

Analysis of Variance for Achievement, Affiliation and Class on the CUES Awareness Scale

Source	df	MS	F	P
Achievement	2	4.66	< 1.00	NS
Affiliation	1	0.00	0.00	NS
Class	3	81.68	5.21	< .005
Affil. X Ach.	2	33.93	2.17	NS
Class X Ach.	6	23.33	1.49	NS
Affil. X Class	3	15.85	1.02	NS
Affil. X Class X Ach.	6	18.92	1.21	NS
Error	288	15.66		

Table 13

Analysis of Variance for Achievement, Affiliation and Class on the CUES Propriety Scale

Source	df	MS	F	P
Achievement	2	4.66	<1.00	NS
Affiliation	1	0.00	0.00	NS
Class	3	15.05	2.32	NS
Affil. X Ach.	2	9.93	1.52	NS
Class X Ach.	6	5.52	<1.00	NS
Affil. X Class	3	8.90	1.37	NS
Affil. X Class X Ach.	6	5.41	<1.00	NS
Error	288	6.50		

Table 14

Analysis of Variance for Achievement, Affiliation and Class on the CUES Scholarship Scale

Source	df	MS	F	P
Achievement	2	7.12	<1.00	NS
Affiliation	1	5.65	<1.00	NS
Class	3	103.82	6.61	<.005
Affil. X Ach.	2	3.35	<1.00	NS
Class X Ach.	6	28.14	1.85	NS
Affil. X Class	3	20.28	1.33	NS
Affil. X Class X Ach.	6	41.57	2.73	<.025
Error	288	15.18		

Table 15

Analysis of Variance for Achievement, Affiliation and Class on the CUES Campus Morale Scale

Source	df	MS	F	P
Achievement	2	2.51	<1.00	NS
Affiliation	1	0.25	<1.00	NS
Class	3	70.78	4.87	<.01
Affil. X Ach.	2	3.50	<1.00	NS
Class X Ach.	6	14.65	1.01	NS
Affil. X Class	3	17.98	1.24	NS
Affil. X Class X Ach.	6	33.78	2.32	<.05
Error	288	14.50		

Table 16

Analysis of Variance for Achievement, Affiliation and Class on the CUES Quality of Teaching and Faculty-student Relationships Scale

Source	df	MS	F	P
Achievement	2	1.00	1.00	NS
Affiliation	1	0.20	1.00	NS
Class	3	13.35	2.74	.05
Affil. X Class	2	0.62	1.00	NS
Class X Ach.	6	4.31	1.00	NS
Affil. X Class	3	11.03	2.26	NS
Affil. X Class X Ach.	6	9.95	1.96	NS
Error	288	4.87		

Table 17

Tukey's (a) Test for Three Pairwise Comparisons for Differences Between Achievement Levels on the Practicality Scale

			High Ach. $\bar{X}$ 10.12	Medium Ach. $\bar{X}$ 10.93	Low Ach. $\bar{X}$ 11.24
High Ach.	$\bar{X}$	10.12		0.81	1.12*
Medium Ach.	$\bar{X}$	10.93			0.31
Low Ach.	$\bar{X}$	11.24			

*p .05

Analysis of Students' Perceptions at Different Levels of Achievement

The third principal question investigated was the degree to which the perceptions of low-affiliated students differ from those of high-affiliated students. The affiliation main effect, which corresponds to this question, was not significant ($p > .05$) on any CUES scale. The insignificant F values for the affiliation main effect on the seven CUES scales are shown in Table 10 through 16.

Analysis of Students' Perceptions At Different Class Levels

The fourth principal question investigated was the degree to which the perceptions of each class differ from the perceptions of each of the other three classes. The class main effect, which corresponds to this question, was significant on the Awareness scale ($p < .005$), Scholarship scale ($p < .005$), Campus Morale scale ($p < .01$), and Quality of Teaching and Faculty-student Relationships scale ($p < .05$). The class main effect was not significant ($p > .05$) on the Practicality, Community, and Propriety scales. The F values for the class main effect on the three scales on which it was not significant are shown in Tables 10, 11, and 13. In addition to the significant class main effect on the Scholarship and Campus Morale scales, there was also a significant achievement X class X affiliation three-way interaction ($p < .025$ on the Scholarship scale; $p < .05$ on the Campus Morale scale) on both scales (see

Tables 14 and 15). With a significant main effect and a significant interaction effect, Kirk (1968) suggests an analysis of simple-simple main effects. Consequently the significant class main effect and the significant achievement X class X affiliation three-way interaction on the Scholarship and Campus Morale scales were analysed for simple-simple main effects and post-hoc comparisons were also made. Post-hoc pairwise comparisons were also made of the significant class main effect on the Awareness and Quality of Teaching and Faculty-student Relationships scales.

Post-hoc comparisons of class perceptions. Tukey's (a) procedure (Winer, 1962) was used to make post-hoc pairwise comparisons between all mean scores for the class main effect on the Awareness and Quality of Teaching and Faculty-student Relationships scales. Pairwise comparisons between all mean scores on the Awareness scale are reported in Table 18. The mean score for freshmen was significantly ($p < .05$) higher than the mean score for juniors and the mean score for seniors. All other pairwise comparisons were not significant.

Comparisons between all mean scores for the class main effect on the Quality of Teaching and Faculty-student Relationships scale are reported in Table 19. The mean score for freshmen was significantly ($p < .05$) higher than the mean score for juniors. All other pairwise comparisons were not significant.

Simple-simple main effects and post-hoc comparisons for class perceptions. The class main effect and the achievement X class X affiliation three-way interaction on the Scholarship and

Table 18

Tukey's (a) Test for Four Pairwise Comparisons for Differences Between Classes on the Awareness Scale

			Jun. $\bar{X}$ 8.71	Sen. $\bar{X}$ 8.88	Soph. $\bar{X}$ 9.37	Fresh. $\bar{X}$ 10.96
Jun.	$\bar{X}$	8.71		0.17	0.66	2.25*
Sen.	$\bar{X}$	8.88			0.49	2.08*
Soph.	$\bar{X}$	9.37				1.59
Fresh.	$\bar{X}$	10.96				

*p $<$ .05

Table 19

Tukey's (a) Test for Four Pairwise Comparisons for Differences Between Classes on the Quality of Teaching and Faculty-student Relationships Scale

			Jun. $\bar{X}$ 3.84	Sen. $\bar{X}$ 4.14	Soph. $\bar{X}$ 4.28	Fresh. $\bar{X}$ 4.83
Jun.	$\bar{X}$	3.84		0.30	0.44	0.99*
Sen.	$\bar{X}$	4.14			0.14	0.69
Soph.	$\bar{X}$	4.28				0.55
Fresh.	$\bar{X}$	4.83				

*p $<$ .05

Campus Morale scales were analysed for simple-simple main effects according to Kirk's (1968) procedure. The summaries of the simple-simple main effects for both scales are presented in Table 20 and 21. To protect against Type I errors, the alpha levels for each set of comparisons was adjusted (Dunn's Technique of dividing the alpha level by the number of comparisons, Hays, pg. 489) so that for each set the probability of making a Type I error would not exceed the .05 level.

The mean scores for the four classes on the Scholarship scale differed significantly ($p < .005$) at the high-achievement--low-affiliation levels. The mean scores for the four classes did not differ significantly at all other combinations of achievement-affiliation levels.

The mean scores for the four classes on the Campus Morale scale differed significantly ($p < .005$) at the high-achievement--low-affiliation levels, medium-achievement--high-affiliation levels, ($p < .01$) and low-achievement--low affiliation levels ($p < .005$). The mean scores for the four classes did not differ significantly at all other combinations of achievement-affiliation levels.

Tukey's (a) procedure (Winer, 1962) was used to make post-hoc pairwise comparisons between all means for the class main effect at significant achievement-affiliation levels on the Scholarship and Campus Morale scales.

Pairwise comparisons between all class means at the high-achievement--low affiliations levels on the Scholarship scale are reported in Table 22. The mean score for high-achieving low-

Table 20

Analysis for Simple-Simple Main Effects
on the CUES Scholarship Scale

Source	df	MS	F
Class at High-Ach.--Low Affil.	3	60.08	4.14**
Class at High-Ach.--High-Affil.	3	12.63	<1.00
Class at Medium-Ach.--Low-Affil.	3	10.38	<1.00
Class at Medium Ach.--High-Affil.	3	34.85	2.40
Class at Low-Ach.--Low-Affil.	3	49.61	3.42
Class at Low-Ach.--High-Affil.	3	17.99	1.24
Error	288	14.50	

**p < .005

Table 21

Analysis for Simple-Simple Main Effects
on the Campus Morale Scale

Source	df	MS	F
Class at High-Ach.--Low-Affil.	3	66.33	4.36**
Class at High-Ach.--High-Affil.	3	16.30	1.07
Class at Medium-Ach.--Low-Affil.	3	24.17	1.59
Class at Medium-Ach.--High-Affil.	3	64.51	4.24*
Class at Low-Ach.--Low-Affil.	3	77.76	5.12**
Class at Low-Ach.--High-Affil.	3	18.04	1.18
Error	288	15.18	

*$p < .01$
**$p < .005$

Table 22

Tukey's (a) Test for Four Pairwise Comparisons for Differences Between Classes at High-Achievement--Low-Affiliation Levels on the Scholarship Scale

			Jun. $\bar{X}$ 6.08	Sen. $\bar{X}$ 7.23	Fresh. $\bar{X}$ 9.77	Soph. $\bar{X}$ 10.69
Jun.	$\bar{X}$	6.08		1.15	3.69	4.61*
Sen.	$\bar{X}$	7.23			2.54	3.46
Fresh.	$\bar{X}$	9.77				0.92
Soph.	$\bar{X}$	10.69				

*$p < .05$

affiliated sophomores was significantly ($p < .05$) higher than the mean score for high-achieving--low-affiliated juniors. All other pairwise comparisons were not significant.

Pairwise comparisons between all class mean scores at the high-achievement--low-affiliation levels on the Campus Morale scale are reported in Table 23. The mean score for high-achieving--low-affiliated freshmen was significantly ($p < .05$) higher than the mean score for high-achieving--low-affiliated seniors, and the mean score for high-achieving--low-affiliated sophomores was significantly ($p < .05$) higher than the mean score for high-achieving--low-affiliated seniors. All other pairwise comparisons were not significant.

Pairwise comparisons between all class mean scores at the medium-achieving--high-affiliated levels on the Campus Morale scale are reported in Table 24. The mean score for medium-achieving--high-affiliated freshmen was significantly ($p < .05$) higher than the mean scores for medium-achieving--high-affiliated sophomores, juniors, and seniors. All other pairwise comparisons were not significant.

Pairwise comparisons between all class mean scores at the low-achieving--low-affiliated levels on the Campus Morale scale are reported in Table 25. The mean score for low-achieving--low-affiliated freshmen was significantly ($p < .05$) higher than the mean scores for low-achieving--low-affiliated sophomores and juniors. All other pairwise comparisons were not significant.

Table 23

Tukey's (a) Test for Four Pairwise Comparisons for Differences Between Classes at High-Achievement--Low-Affiliation Levels on the Campus Morale Scale

			Sen. $\bar{X}$ 4.92	Jun. $\bar{X}$ 6.23	Soph. $\bar{X}$ 9.00	Fresh. $\bar{X}$ 9.69
Sen.	$\bar{X}$	4.92		1.31	4.08*	4.77*
Jun.	$\bar{X}$	6.23			2.77	3.46
Soph.	$\bar{X}$	9.00				0.69
Fresh.	$\bar{X}$	9.69				

*p < .05

Table 24

Tukey's (a) Test for Four Pairwise Comparisons for Differences Between Classes at Medium-Achievement-Low-Affiliation Levels on the Campus Morale Scale

			Jun. X 5.31	Sen. X 5.54	Soph. X 5.85	Fresh. X 10.00
Jun.	$\bar{X}$	5.31		0.23	0.54	4.69*
Sen.	$\bar{X}$	5.54			0.31	4.46*
Soph.	$\bar{X}$	5.85				4.15*
Fresh.	$\bar{X}$	10.00				

*p < .05

Table 25

Tukey's (a) Test for Four Pairwise Comparisons for Differences Between Classes at Low-Achievement--Low-Affiliation Levels on the Campus Morale Scale

			Soph. $\bar{X}$ 5.15	Jun. $\bar{X}$ 5.69	Sen. $\bar{X}$ 7.46	Fresh. $\bar{X}$ 10.46
Soph.	X	5.15		0.54	2.31	5.31*
Jun.	X	5.69			1.77	4.90*
Sen.	X	7.46				3.00
Fresh.	X	10.46				

*p < .05

Analysis of Low and High-Affiliated Students' Perceptions at Different Levels of Achievement

The first subsidiary question investigated was the degree to which the perceptions of high-affiliated and low-affiliated students differ at high, medium, and low levels of achievement. The affiliation X achievement two-way interaction, which corresponds to this question was not significant on any CUES scale ($p > .05$). The F values for the affiliation X achievement two-way interaction on the seven CUES scales are shown in Table 10 through 16.

Analysis of Classes' Perceptions at Different Levels of Achievement

The second subsidiary question investigated was the degree to which the perceptions of classes differ at high, medium, and low levels of achievement. The class X achievement two-way interaction, which corresponds to this question was not significant on any CUES scale ($p > .05$). The F values for the class X achievement two-way interaction on the seven CUES scales are shown in Tables 10 through 16.

Analysis of Low and High-Affiliated Students' Perceptions Among the Four Classes

The third subsidiary question investigated was the degree to which the perceptions of low-affiliated students differ from

those of high-affiliated students among the four classes. The affiliation X class two-way interaction, which corresponds to this question was not significant ($p > .05$) on any CUES scale. The F values for the affiliation X class two-way interaction on the seven CUES scales are shown in Tables 10 through 16.

Analysis of Low and High-Affiliated Students' Perceptions Within Classes at Different Levels of Achievement

The fourth subsidiary question investigated was the degree to which the perceptions of low and high-affiliated students within the four classes differ at high, medium, and low levels of achievement. The affiliation X class X achievement three-way interaction, which corresponds to this question, was significant on the Scholarship ($p < .025$) and Campus Morale ($p < .05$) scales. The affiliation X class X achievement three-way interaction in conjunction with the class main effect on both the Scholarship and Campus Morale scales had previously been analysed for simple-simple main effects (see principal question four). The affiliation X class X achievement three-way interaction was not significant ($p > .05$) on the other five CUES scales-Practicality, Community, Awareness, Propriety, and Quality of Teaching and Faculty-student Relationships. F values for the affiliation X class X achievement three-way interaction on the two scales on which it was significant are reported in Tables 14 and 15. F values for the affiliation X class X achievement three-way interaction on the five scales on which it was not significant are reported in Tables 10, 11, 12, 13 and 16.

CHAPTER V

SUMMARY, IMPLICATIONS, AND CONCLUSIONS

The purpose of this chapter is threefold. First, a summary of the interpretations of the findings related to research questions will be presented. Second, implications for further research generated by the findings of this study are discussed. Finally, the conclusions arrived at based on the outcome of this study are summarized.

Summary

One of the major purposes of this study (principal question one) was to investigate the degree to which the perceptions of students within each of the four classes differ from those of the faculty and administrators. An examination of the summary tables for the seven analyses of variance and the post-hoc pairwise comparisons for class, faculty, and administrator perceptions reveals that although there was a difference between the perceptions of two of the four classes--freshman and sophomore--on the Quality of Teaching and Faculty-student Relationships scale, none of the classes' perceptions differed from the perceptions of the faculty or administrators on any of the seven CUES scales.

The emphasis of agreement--strong, or moderate, for class, faculty, and administrator perceptions, and descriptions of

the CUES scales reveals specifically how the educational environment of the main campus of the University of Oklahoma is viewed.

Practicality scale. The strong emphasis of agreement on the Practicality scale suggests that the educational environment is viewed as highly structured and systematic. There is much benefit to be gained by knowing the right people and joining the right clubs. The strong emphasis of agreement also suggests that the educational environment at times is restrictive, and that the administration does not always respond to student demands for autonomy and self-expression.

Community scale. The moderate emphasis of agreement on the Community scale suggests that the educational environment is viewed as typically cohesive and friendly. The campus is viewed as a community with a congenial atmosphere. Students and faculty know each other on a personal basis, and faculty members help students with their problems.

Awareness scale. The strong emphasis of agreement on the Awareness scale suggests that there is extensive emphasis on personal, poetic, and political meaning in the educational environment. This means that self-awareness, knowledge of current events, and an appreciation of art, literature, and music are highly emphasized.

Propriety scale. The moderate emphasis of agreement on the Propriety scale suggests that extreme risks are not taken. The campus is basically conventional, with a noticeable emphasis on group standards and decorum. For the most part, students do not

act impulsively.

Scholarship scale. The moderate emphasis of agreement on the Scholarship scale suggests that the University's educational environment is perceived as having some emphasis on intellectual and scholastic pursuits. Interest in scholarship is moderate, and intellectual discipline is not a strong characteristic of the environment.

Campus Morale. The moderate emphasis on the Campus Morale scale suggests that the educational environment is characterized by "middle of the road" acceptance of social norms, group cohesiveness, friendly assimilation into campus life, and at the same time, a commitment to intellectual pursuits.

Quality of Teaching and Faculty-student Relationships scale. The moderate emphasis of agreement on the Quality of Teaching and Faculty-student Relationships scale suggests that the Quality of Teaching is fairly good and that faculty-student relationships are moderately close.

Although none of the classes' perceptions differed from those of the faculty or administrators on any of the seven CUES scales, there was a difference between the perceptions of two of the four classes-freshman and sophomore-on the Quality of Teaching and Faculty-student Relationships scale. The fact that the mean score for sophomores was significantly higher than the mean score for freshmen suggests that sophomores believe that the quality of teaching is higher and that faculty-student relationships are closer than do freshmen. The fact that freshmen scored lower than

sophomores on one scale does not support the findings of Pace (1966a) and Stern (1966), which were that freshmen scored higher on instruments assessing the educational environment (CUES and the CCI) than sophomores.

Principal question two. The second principal question investigated was the degree to which the perceptions of students differ at high, medium, and low levels of achievement. Upon investigation, it was found that the mean score for low-achievers was significantly higher than the mean score for high-achievers. These findings suggest that low-achievers view the educational environment as more structured and systematic than high-achievers.

These findings do not support the findings of Pace's 1966b study, which were that perceptions of the educational environment were unaffected by achievement variables. However, the findings of the present study do support the findings of Herr (1965), which were that achievement influences students' perceptions of the educational environment.

Principal question three. The third principal question investigated was the degree to which the perceptions of low-affiliated students differ from those of high-affiliated students. Upon investigation, it was found that low-affiliated students did not differ significantly from those of high-affiliated students on any of the seven CUES scales. The findings not only generally support Pace's (1963; 1966d) conclusion that "personal characteristics" do not affect the perception of the educational environment, but add to it, that affiliation-in addition to scholastic aptitude

and personality characteristics-does not significantly influence students' perception of the educational environment.

Principal question four. The fourth principal question investigated was the degree to which the perceptions of each class differ from the perceptions of each of the other three classes. Upon investigation, it was found that the class main effect, which corresponds to question four, was significant on the Awareness, Scholarship, Campus Morale, and Quality of Teaching and Faculty-student Relationships scale.

The significant class main effect on both the Awareness and Quality of Teaching and Faculty-student Relationships scales were analysed for post-hoc comparisons. In addition to the significant main effect on the Scholarship and Campus Morale scales, there was also on both scales a significant class X affiliation X achievement three-way interaction. The significant class main effect and the significant class X affiliation X achievement three-way interaction on both scales were analysed for simple-simple main effects and post-hoc pairwise comparisons were then made.

Inspection of the results of the post-hoc pairwise comparisons for the significant class main effect on the Awareness scale reveals that the mean score for freshmen was significantly higher than the mean scores for both juniors and seniors. These findings suggest that freshmen search more for personal, poetic, and political meaning than juniors or seniors.

Inspection of the results of the post-hoc pairwise comparisons for the significant class main effect on the Quality of

Teaching and Faculty-student Relationships scale reveals that the mean score for freshmen was significantly higher than the mean score for juniors. These findings suggest that freshmen more than juniors believe that the quality of teaching is good and that faculty-student relationships are close.

The findings on the Awareness and Quality of Teaching and Faculty-student Relationships scales support the findings of Pace (1966a) and Stern (1966) that freshmen typically score higher than upperclassmen, and their conclusion that freshmen expectations about college life are enthusiastic and idealistic (although somewhat unrealistic).

The analysis of simple-simple main effects on the Scholarship scale reveals that the perceptions of the four classes differed significantly only at the high-achievement--low-affiliation levels. Inspection of the analysis of post-hoc pairwise comparisons for classes at the high-achievement--low-affiliation levels reveals that the mean score for high-achieving--low-affiliated sophomores was significantly higher than the mean score for high-achieving--low-affiliated juniors. These findings suggest that high-achieving--low-affiliated sophomores view the educational environment as being better academically and scholastically than high-achieving--low-affiliated juniors.

The analysis of simple-simple main effects on the Campus Morale scale reveals that the perceptions of the four classes differed significantly at high-achievement--low-affiliation levels, medium-achievement--high-affiliation levels, and low-achievement--

low-affiliation levels. Perceptions of the four classes on the Campus Morale scale did not differ significantly at any other combination of achievement-affiliation levels.

Inspection of the analysis of post-hoc pairwise comparisons for classes at the high-achievement--low-affiliation levels on the Campus Morale scale reveals that the mean score for high-achieving--low-affiliated freshmen was significantly higher than the mean score for high-achieving--low-affiliated seniors. The analysis of post-hoc pairwise comparisons also reveals that the mean score for high-achieving--low-affiliated sophomores was higher than the mean score for high-achieving--low affiliated seniors. These findings suggest that high-achieving--low-affiliated freshmen and sophomores more than high-achieving--low-affiliated seniors believe that the educational environment is characterized by greater acceptance of social norms, group cohesiveness, friendly assimilation into campus life, and at the same time, a commitment to intellectual pursuits.

Inspection of the analysis of post-hoc pairwise comparisons for classes at the medium achievement--high affiliation levels on the Campus Morale scale reveals that the mean score for medium-achieving--high-affiliated freshmen was significantly higher than the mean scores for medium-achieving--high-affiliated sophomores, juniors, and seniors. These findings suggest that medium-achieving--high-affiliated freshmen believe more than medium-achieving--high-affiliated sophomores, juniors, and seniors, that the educational environment is characterized by greater acceptance of social norms,

group cohesiveness, friendly assimilation into campus life, and at the same time, a commitment to intellectual pursuits.

Inspection of the analysis of post-hoc pairwise comparisons for classes at the low-achieving--low-affiliated levels on the Campus Morale scale reveals that the mean score for low-achieving--low-affiliated freshmen was significantly higher than the mean scores for low-achieving--low-affiliated sophomores and juniors. These findings suggest that low-achieving--low-affiliated freshmen believe more than low-achieving--low-affiliated sophomores and juniors, that the educational environment is characterized by greater acceptance of social norms, group cohesiveness, friendly assimilation into campus life, and at the same time, a commitment to intellectual pursuits.

Inspection of the analysis of post-hoc pairwise comparisons for classes at the low-achieving--low-affiliated levels on the Campus Morale scale reveals that the mean score for low-achieving--low-affiliated freshmen was significantly higher than the mean scores for low-achieving--low-affiliated sophomores and juniors. These findings suggest that low-achieving--low-affiliated freshmen believe more than low-achieving--low-affiliated sophomores and juniors, that the educational environment is characterized by greater acceptance of social norms, group cohesiveness, friendly assimilation into campus life, and at the same time, a commitment to intellectual pursuits.

Inspection of the post-hoc pairwise comparisons between all means for the class factor at significant achievement-affiliation

levels on the Scholarship and Campus Morale scales revealed that for both scales there were a total of eight significant comparisons. Of these eight comparisons, seven were on the Campus Morale scale and one was on the Scholarship scale. Inspection of the eight comparisons reveals that in six cases freshmen scored higher than sophomores and upperclassmen, and in the two remaining cases reveals sophomores scored higher than juniors (Scholarship scale) and seniors (Campus Morale). Note that in no case did sophomores, juniors, or seniors score significantly higher than freshmen, and that upperclassmen (juniors and seniors) did not score significantly higher than sophomores. Although Pace (1966a) did not classify students by achievement and affiliation levels, the findings lend some support to his findings that freshmen typically scored higher in most cases than sophomores and upperclassmen on all CUES scales, and that sophomores consistently scored higher than upperclassmen on several of the scales, one of them being the Scholarship scale.

Subsidiary question one. The first subsidiary question investigated was the degree to which the perceptions of high-affiliated and low-affiliated students differ at high, medium, and low levels of achievement. The results indicated that perceptions of low-affiliated and high-affiliated students did not differ at high, medium, and low levels of achievement on any of the seven CUES scales. The findings add further support to Pace's conclusion that "personal characteristics" do not influence the perception of the educational environment. It is now known that affiliation

does not interact with achievement on any CUES scale to significantly influence students' perception of the educational environment. The findings also generally support the theory (Pace, 1963) that educational environments can be assessed with some degree of objectivity in their own right.

Subsidiary question two. The subsidiary question investigated was the degree to which the perceptions of classes differ at high, medium, and low levels of achievement. The results indicated that perceptions of classes at high, medium, and low levels of achievement did not differ on any of the seven CUES scales.

Subsidiary question three. The third subsidiary question investigated was the degree to which the perceptions of low-affiliated students differ from those of high-affiliated students among the four classes. The results indicated that perceptions of low and high-affiliated students among the four classes did not differ on any of the seven CUES scales.

Although the findings of past studies (Pace, 1966a; Stern, 1966) revealed differences in the perceptions of classes, the findings of secondary questions two and three suggest that the class factor does not interact with either the achievement factor, or the affiliation factor to influence on any CUES scale the students' perceptions of the educational environment.

Subsidiary question four. The fourth subsidiary question investigated was the degree to which the perceptions of low and high-affiliated students within the four classes differ at high,

medium, and low levels of achievement. Upon investigation, it was found that the affiliation X class X achievement three-way interaction was significant on the Scholarship and Campus Morale scales. The three-way interaction (affiliation X class X achievement) was not significant on the Practicality, Community, Awareness, Propriety, and Quality of Teaching and Faculty-student Relationships scales. Thus students' perceptions on the Scholarship and Campus Morale scales were found to vary due to class, achievement, and affiliation category. It is interesting to note that although the three-way interaction was significant on two CUES scales, none of the two-way interactions (affiliation X achievement, class X achievement, and affiliation X class) were significant on any of the CUES scales. It is possible that the significant three-way interaction on two of the CUES scales was due to chance; it is difficult to plausibly explain the findings otherwise. Since seven comparisons were made (one for each CUES scale) at the 5% level of significance, the risk of making the Type I error and falsely rejecting the null hypothesis is 30.2% (Reynolds, undated). This risk is substantial.

Implications

In this section, implications for future research are discussed. There are several important points to be considered.

First, it has been noted that none of the classes' perceptions differed from the perceptions of the faculty or administrators on any of the seven CUES scales. The agreement or consensus of the perceptions of the four classes with those of the faculty and administrators on all seven CUES scales, does not support the

findings of Pace (1966c), which were that the faculty typically score higher on CUES than students. One speculative explanation for the contrast of the present findings with those of Pace is that students and faculty perceive the educational environment similarly because they are keenly aware of the problems and difficulties confronting universities today. The tendency toward political activism among students, faculty, and some administrators has markedly increased over the last several years (Stern, 1966). On the campus of the University of Oklahoma, there is evidence (Executive Planning Committee of the University of Oklahoma, 1968), that students, faculty, and administrators are very much concerned about the effectiveness of the University as an institution of higher education. Because of such concern, these groups are sensitive and aware of the nature of their educational environment. Therefore, it is not surprising that students, faculty, and administrators similarly perceive the educational environment. What is not evident, however, is whether they agree on how the University should be changed, if changed at all. At this point it is not known what practices, policies, or other conditions might be modified to change the atmosphere of the educational environment in a desired direction. The findings have only indicated that the perceptions of each class are congruent with the perceptions of the faculty and administrators, but it is not known whether their educational objectives are the same. An implication for future research, then, is to ask samples of students, faculty, and administrators to respond to CUES by indicating what they hope, or want the college

to be like, in addition to asking them to respond to the items in the usual way. Thus "actual" and "ideal" responses of these groups can be compared. This would reveal to what extent the educational objectives of each of the various groups are congruent with each of the other groups, as well as to what extent the objectives of each group are being met.

Second, in this study, the perceptions of freshmen were not consistent (freshmen in the subsample of size 78 scored higher than juniors on the Quality of Teaching and Faculty-student Relationship scale, while freshmen in the subsample of size 26 scored lower than sophomores on the same scale). The findings of previous studies (Pace, 1966a; Stern, 1966) revealed that freshmen scored higher than both sophomores and upperclassmen (juniors and seniors) on all CUES scales. How can the inconsistency of the freshmen's perceptions be accounted for? The weight of previous evidence (Pace, 1966a; Stern, 1966) supports the findings associated with the subsample of size 78. Therefore, the discrepancy could lie in the subsample of size 26. Perhaps the findings associated with the subsample of size 26 are due to the Type I error. Since five post-hoc pairwise comparisons were made at the 5% level of significance, the risk of making the Type I error and falsely rejecting the null hypothesis is 22.6% for each comparison made (Reynolds, undated). This risk is fairly substantial. Nevertheless, this explanation is only speculative and further study of class perceptions is suggested on the Quality of Teaching and Faculty-student Relationships scale.

Third, the findings on the Practicality scale--that low-achievers view the educational environment as more structured and systematic than high-achievers--does not support Pace's (1963; 1966b) conclusion that student perceptions of the educational environment are unaffected by achievement variables. The findings do support, conversely, Herr's (1965) contention that achievement does modify student perception of the educational environment. The findings of this study suggest implications for future research in that there may be a relationship between achievement and kinds of educational environments. Perhaps low-achievers could do better academically in unstructured, unsystematic environments. High-achievers may do as well as they do in part because they perform best in highly structured, systematic environments. Further study may clarify the nature of these relationships.

In addition to a relationship between achievement and kinds of educational environments, there also may be a relationship between personality and educational environments, which it may be of value to explore. One wonders whether highly organized, methodical individuals might do better in highly structured, systematic educational environments, and those who are not methodical in unstructured, unsystematic educational environments.

Finally, although CUES was specifically designed for use with the opinion-polling or collective-perception rationale (a consensus of two-to-one or greater among respondents for items answered in the keyed direction is necessary to identify a characteristic of the environment), the use of CUES in this study

with the individual-difference approach, whereby the number of items answered in the keyed direction for each respondent were counted, holds promise for future use of this approach, since findings of this study support findings and conclusions of previous studies (Pace, 1966a, Pace, 1966d; Stern, 1966).

Specific implications for future research are summarized below:

1. Clarification of the relationship between achievement and kinds of educational environments.
2. Clarification of the relationship between personality variables and educational environments.
3. Clarification of the relationship between the perceptions of freshmen and those of sophomores and juniors on the Quality of Teaching and Faculty-student Relationship scale.
4. Comparisons of the "actual" and "ideal" responses of various university groups.
5. Comparison of the individual-difference approach with the collective-perception approach to see if findings gained with both approaches are comparable.

Conclusions

The purpose of this study was to provide a description of the educational environment on the main campus of the University of Oklahoma. The instrument chosen for this purpose was the College and University Environment Scales (CUES) second edition (1969). The findings of this study generally supported Pace's (1963) theory that educational environments can be assessed in their own right with some degree of objectivity.

One more point needs to be made. Although this writer

believes CUES to be the best instrument available for assessing the educational environment, he does not believe that it is perfect. The writer received feedback from several of the subjects indicating that some of the CUES questions were no longer "relavant." Careful periodic reevaluation of all CUES questions would serve to eliminate outdated questions that do not have meaning for subjects attempting to accurately describe their educational environment.

The specific conclusions based upon the findings of this study are summarized as follows: (1) Faculty, administrators, and student classes agree in their perceptions of the educational environment. (2) Freshman expectations about college life are enthusiastic and idealistic, but unrealistic. (3) Low-achievers view the educational environment as more structured and systematic than high-achievers. (4) Low-affiliated students' perceptions did not differ from those of high-affiliated students. (5) The class factor does not interact with the achievement factor or the affiliation factor to influence students' perceptions of the educational environment. (6) Affiliation, in addition to the "personal characteristics" of personality and scholastic aptitude does not significantly influence students' perceptions of the educational environment.

Identification of the kinds of educational environments students and prospective students are seeking may be useful in counseling with them. The University too can use this information in clarifying the modifications necessary to insure maximum

development of potential and identification with University goals for all its students. Only through diligent continued research can the University hope to keep pace with its students.

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Appendices

Appendix A

(Face Sheet)

Name _____ Present Classification:

I.D. Number _____ Freshman _____
Sophomore _____
Sex: M_____ F_____ Junior _____
Senior _____

Directions: Please answer the following questions

1. Are you now a full-time student? (Twelve or more credit hours per semester is full-time). yes__ no__

2. Did you transfer to O.U. this (spring 1970) semester? yes__no__

3. Is this semester (spring 1970) your first in college? (If your answer is "yes" omit question 7). yes__no__

4. Total grade point average for previous semesters attended (do not include "projected" grade point average for this spring 1970 semester). (check one)
3.0 to 4.0___
2.0 to 2.9___
1.9 & below__

5. Do you currently belong to a social fraternity or sorority? yes__no__

Appendix B

(Checklist)

Religious Organizations on Campus

Directions: Check those organizations to which you belong

Assembly of God
___(Chi Alpha)

Bahai Fatih
___Bahai Club

Baptist
___Baptist Student Union

Campus Crusade for Christ
___International

Christian Science
___Christian Science Organ.

Church of Christ
___Christian Student Center

Episcopal
___St. John's Episcopal Church

___Greek Orthodox

Jewish
___Hillel Foundation

Latter Day Saints
___Deseret Club

Lutheran
Lutheran student Center

Methodist
Wesley Foundation

Missionary Baptist
Concord Missionary Baptist Church

Nazarene Youth Fellowship
The Lishona Fellowship

Roman Catholic
St. Thomas Moore University Chapel

Society of Friends
Quaker Student Group

Unitarian-Universalist
Student Religious Liberals

United Campus Christian Fellowship

Other Religious Organizations

_____

_____

_____

Appendix B (continued)

Other Campus Organizations

Directions: Check those organizations to which you belong

___Accounting Club
___AIESC (Economics)
___Alpha Epsilon Delta (Pre-Med)
___Alpha Lambda Delts (Hon. Soror.)
___Alpha Phi Omega (Service)
___Amer. Institute of Chem. Eng.
___Amer. Meterological Society
___Amer. Red Cross College Unit
___Amer. Soc. of Civil Eng.
___Amer. Soc. of Mechan. Eng.
___Angel Flight
___Anthropology Club
___Arab Club
___Army ROTC Cadet Officers
___Arnold Air Society (AFROTC)
___Assoc. of Graduate Assistants
___Assoc. of U. S. Army-Sooner Co.
___Campus Chest
___Chess Club
___Chi Epsilon Pi (Meterology)
___Chinese Student Association
___Coed Affiliates of Pershing Rifles (Caper)
___Conference on Religion
___Cultural Events Committee
___CWENS (Soro. Women's Hon.)
___Delta Sigma Pi (Bus. Hon.)
___Gamma Gamma (Greek Hon.)
___Gamma Theta Upsilon (Geol.)
___Homecoming
___Honors Programming Consultants
___Howdy Week
___Human Rights Research Council
___Indian Students Assoc.
___Industrial Engineers Club
___Institute of Electrical & Electronics Engineers
___Interdisciplinary Study Group
___Iranian Students Society
___Jones Family Grandchildren
___Kappa Epsilon (Pharmacy)
___Lambda Tau (Med. Tech. Hon.)
___Lutheran Student Group (Gamma Delta)
___Men's Residential Council
___Model United Nations
___Mortar Board (Hon.)
___Mu Alpha Delta (Law)
___Mu Phi Epsilon (Music)
___Nat'l Assoc. of Student Planners & Architects
___Nazarene Student Activity Assoc.
___Oklahoma Intercollegiate Legislature
___Oklahoma Law Review
___Oklahoma Leadership Forum
___Omicron Delta Kappa
___OU Cinema Society
___OU Judo Club
___OU Student Lobby for Higher Education
___OU Assoc. of Petroleum Landman
___OU Intercollegiate Rifle Team
___OU Skydivers
___OU Soccer Club
___OU Student Marketing Club
___Pe-et
___Pershing Rifles
___Phi Alpha Delta (Law)
___Phi Alpha Theta (History)
___Phi Beta Kappa
___Phi Deltal Chi (Pharmacy)
___Philosophy Club
___Pi Sigma Alpaha (Gov't)
___Pop Series Committee
___Robertson House
___SAC Film Series
___Semper Fidelis Society
___Sigma Gamma Epsilon (Geol.)
___Sigma Tau (Engineering)
___Soc. of Amer. Military Engin.
___Soc. of Physics Students
___Soc. for Advancement of Manag.
___Sooner Pharmaceutical Assoc.
___Sooner Rally Council

Appendix B (continued)

Other Campus Organizations (continued)

___Sooner Wheelers (Handicapped Students)
___Speakers' Bureau
___Student Action
___Student Affiliates of the Amer. Chemical Society
___Student Bar Assoc. Board of Governors
___Student Chapter of the Amer. Institute of Architects
___Student Nat'l Educ. Assoc.
___Student Nuclear Assoc.
___Tassels (Jr. Women Hon.)
___Tau Beta Pi (Engineering)
___Theta Sigma Phi (Engineering)
___Theta Sigma Phi (Adv. Sorority)
___Trident Society
___Women Engineers Club
___Women's Upperclass Honors House

List Others:

_____
_____
_____

Appendix C

By C. Robert Pace

COLLEGE & UNIVERSITY ENVIRONMENT SCALES

Second Edition, Form X-2

New Jersey, Educational Testing Service

Appendix D

Item Numbers Scored on the First Edition and Their Corresponding Numbers on the Second Edition

Practicality		Community		Awareness		Propriety		Scholarship	
1st Ed[a]	2nd Ed	1st Ed[a]	2nd Ed	1st Ed[a]	2nd Ed	1st Ed[a]	2nd Ed	1st Ed[a]	2nd Ed
2	58	1	76	4[c]	81	61	94	16[F]	18
7	57	32	26	47	36	63	95	17	61
8	55	34[F]	79	50	39	65[F]	46	21[F]	16
10	8	35	78	54	31	66[F]	49	22	14
11	7	36	25	56	86	70	50	23	11
12	60	40	74	57	33	71	48	24	15
14	6	42	28	58	85	72[F]	92	27[F]	66
18[b]	1	43	71	59	38	73[F]	43	28[F]	20
77	56	44	24	60	37	75[F]	44	29	17
78	2	45	77	62[d]	84	136[F]	45	30	63
79	4	107	23	122[F]	90	137[F]	97	92	68
80	54	108[F]	30	123	83	139[F]	96	95	13
81	52	110	72	124	87	141[F]	93	96	64
83	59	111	27	127	89	142[F]	42	98	62
84[F]	10	114	29	130[F]	82	145[F]	47	99	65
85[F]	9	115	80	131	40	146[F]	100	100	70
86	5	117[F]	75	132	34	147	91	101	69
87	53	119	22	133	88	148	98	104[F]	67
88	3	138	73	134	35	149[F]	99	105	19
90	51	144	21	135	32	150	41	121	12

a. In First Edition columns only, assume a key of True for all unmarked items.

b. Keyed False in First Edition as part of Scholarship scale.

c. Keyed False in First Edition as part of Practicality scale.

d. Keyed False in First Edition as part of Propriety scale.

Appendix D (continued)

Campus Morale		Quality of Teaching and Faculty-Student Relationships	
1st Ed.	2nd. Ed.	1st. Ed.	2nd. Ed.
78T	2T	18F	1F
84F	10F	121T	12T
22T	14T	24T	15T
119T	22T		
36T	25T	28F	20F
111T	27T	36T	25T
42T	28T	17T	61T
114T	29T		
54T	31T	99T	65T
135T	35T	27F	66F
60T	37T	138T	73T
70T	50T	117F	75F
17T	61T	34F	79F
98T	62T		
30T	63T		
40T	74T		
117F	75F		
115T	80T		
130F	82F		
123T	83T		
137F	97F		
149F	99F		

Appendix E

Purpose of Study Presented to Students

You have been invited to participate in a study of the University of Oklahoma's educational environment. You have been asked because as students you have a good opportunity to know what this university is like. So, assume that you are a reporter and are being asked to say what you think is generally true or characteristic about this campus. Read the directions in the questionnaire booklet carefully and mark your answers on the answer sheets as either True or False. There is no time limit for this questionnaire, but most of you will probably be able to answer all the items in 20 to 30 minutes. Although you are asked to write your name and give other information, you may be assured that your replies will be treated anonymously, and no published report will ever attach your name to your answers. The information requested is for research purposes only. The purpose of the questionnaire is to find out what students, administrators, and faculty believe to be characteristic of this university.

Appendix F

Specific Instructions for Students on How to Fill Out the "Face Sheet," Campus Organization Checklist, and CUES.

(Read aloud)

1. Fill out the "Face Sheet."

2. Please answer the questions on the "Face Sheet" and check organizations to which you belong.

   (Pause for several minutes, then say, "Any Question?")

3. After you complete the "Face Sheet" fill out the heading on the IBM answer sheet. (Heading includes: Name, Grade, Sex, Date of birth, Age, School, City, Instructor, Identification Number, and Name of Test (CUES).

4. Read the directions in the questionnaire booklet carefully and mark your answers on the answer sheet as either True or False.

5. Please answer all 150 questionnaire items; if you are uncertain about your answer to a particular item, guess! Do not leave any item unanswered.

6. For answering True use column I; for answering False use column 2.

7. After you complete the questionnaire (CUES) be sure to place the answer sheet inside the "Face Sheet." Do not place the answer sheet inside the questionnaire booklet. (Repeat instruction # 7 and demonstrate procedure).

Appendix G

General Instructions for Faculty and Administrators

As part of a research study you have been invited to participate in a study of the University of Oklahoma's educational environment. As a faculty member (or administrator) you have a good opportunity to know what this university is like, and you are being asked what you think is generally true or characteristic about this campus. Read the directions and the questionnaire booklet carefully and mark your answers on the answer sheet as either True or False. There is no time limit for this questionnaire, but you will probably be able to answer all the items in 20 to 30 minutes. You will note that you are not being asked to write your name or give other information. You may be assured that your replies will be treated anonymously, and no published report will ever attach your name to your answers. The information requested is for research purposes only. The purpose of this study is to find out what administrators, faculty members, and students believe to be characteristic of this university.

Appendix H

Letter Explaining Purpose of Study to
Faculty Members and Administrators

Dear Colleague:

I am coming to you with what I feel to be an unusual opportunity. We would like for you to help us assess the educational environment here at the University of Oklahoma. For institutions to be able to grow and improve, they must have the courage to engage in careful, objective self-study. I feel that this study is one that makes a significant contribution in the area of self-evaluation and assessment of our current status quo.

Mr. Martin Resnick* is conducting this study and we feel that it is well designed and unique in nature. It should provide us with the kind of relevant data needed to assist in the determination of strengths and weaknesses in our educational environment.

The instrument has been used in the study of other campuses. Our data will be compared with data from studies of other campuses. A report will be available to those requesting it.

Your help on this project will be greatly appreciated.

*Graduate Student

Sincerely,
(signed)

John G. Jones, Ph.D.
Assistant Professor