Relationship of Residence Hall Environments and Student Sense of Competence and Academic Achievement

by

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

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January 1987

Blacksburg, Virginia

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(ABSTRACT)

The relationship between student-environment fit and sense of competence and academic achievement among freshmen at a large, land-grant university in the southeast was examined. Fit scores derived from the University Residence Environment Scale (URES) were used as independent measures. Sense of competence, one's level of interpersonal and intellectual confidence, was measured by scores on the Sense of Competence Scale (SCS) developed by the researcher. Grade point averages served as the measure of academic achievement. These latter measures, sense of competence and academic achievement, were used as dependent measures. Multiple regression was used to examine the relationship between these two sets of variables.

A stratified sample of 600 freshmen students was selected from a freshmen class of 4280 who were required to live in residence halls. Of the 600, 428 (71.3%) returned useable questionnaires.

Respondents indicated that the residence hall environment was not as emotionally supportive nor intellectually stimulating as expected. They reported that the residence hall environment was too competitive and that there needed to be more opportunity for student influence.

The relationships between student-environment fit and sense of competence, and student-environment fit and academic achievement were not strong. Actual discrepancy scores proved to be the better measure of fit when compared to perceived discrepancy scores.

ACKNOWLEDGEMENTS

This dissertation is dedicated with my greatest love to my wife Rhoda, and my son, David. Their unconditional support and patience made the completion of this project possible. They were my inspiration. They were my strength.

I wish also to thank the members my doctoral committee. Drs. Sullins, Creamer, and Robinson provided a great deal of guidance and support. Their counsel always helped me clarify problems and identify solutions. They were of enormous professional and personal assistance. Dr. Cross taught me a great deal about research design and research methods. Dr. Andrew helped me develop an effective writing style and encouraged me to write for publication. I am sure that this dissertation would have been completed much earlier if they had been less successful. During the course of this degree, I completed a number of "unscheduled" research projects which were of interest to my peers. These were pleasant and productive diversions. To each of them, I am grateful.

Dr. Sandra M. Sullivan, Vice President for Student Affairs, and Dr. Edward F. D. Spencer, Director of Housing and Residence Life also deserve my thanks. They arranged and supported my educational leave.

Finally, I wish to thank my mother and father, Mr. and Mrs. James P. Janosik; my brother, Chris; and two of my

closest friends, Peggy Dunn and Julie Curtis. They always believed in me. They helped me to maintain my sense of humor through the difficult times and helped me focus on what was important. To my family and friends, I will always be grateful.

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

LIST OF TABLES

CHAPTER 1

Student personnel professionals normally attempt to establish atmospheres in residence halls which foster personal and intellectual growth. Numbers of programs and services have been designed and implemented in the residence hall setting to help create a positive environment for growth. Recently, concern over the benefits of residence halls and the freshmen student has increased. Increasing competition to attract decreasing numbers of traditionally aged college freshmen has been one reason given for this concern. Now more than ever, institutions are marketing the residence hall experience as an educationally important component of college life. Accordingly, administrators demand more responsiveness from student personnel staff by making greater efforts to upgrade the quality of the living environment and by conducting more studies that may result in improved student services (Riker, 1976). While many programs designed to orient and support students during their freshmen year have been implemented and usually evaluated, few studies have examined the relationship between the overall living environment created in residence halls and the interpersonal and intellectual development of freshmen. Chickering (1969) defined this type of growth as developing a sense of competence and labelled it a critical developmental task for freshmen

students. Few in student affairs have evaluated programs for freshmen with this outcome in mind, however.

Evaluations of the residence life area have been very broad in scope (Phillips & Schuh, 1979). These evaluations have examined educational, social, recreational programs; managerial and administrative services; professional development of residence life staff; and general benefits of the residence life experience for students. Miller and Prince (1976) suggested that the single most important purpose of these evaluations is to provide accurate information that can be used in revising the program itself. The processes used to evaluate programs in the residence life area have varied widely. Whittington (1974) used interviews to assess student reaction to the living and academic atmosphere in a newly constructed residence hall as a way to assess the benefits of the new construction. Madson, Kuder, Hartanov, and McKelfresh (1976) measured the impact of residential academic unit programs by assessing the satisfaction, agreement, and involvement of participants. Magnarella (1975) conducted an evaluation of a living-learning center by asking participants to compare the center to other residence halls.

Evaluations of residence life frequently have focused on students' reaction to a specific program or on what students learn from a specific experience. Banning and Kaiser (1974) suggested that the popularity of these methods of evaluation was influenced by the traditional perspectives

that guided the work of student service professionals. These included an overemphasis on students as individuals and their interpersonal development. An additional factor that contributed to the focus on the individual might have been the disciplinary orientation of counseling psychology, common in programs, where students were viewed as subjects or clients responding to a specific treatment. Banning and McKinley (1980) suggested that this view was a benevolent one that failed to account for the causative role of the environment on the student.

Student personnel professionals have developed a new approach to their work, however, which focuses on adapting the institution to the student as a way of fostering student growth (Winkler, 1985). The approach is based on the assumption that what a person does as a thinker is influenced by what happens in an emotional and social environment. Aulepp and Delworth (1976) have suggested that student growth can be enhanced by the intentional design of environments that ameliorate unnecessary problems for the student. This environment must offer "optimal incongruence." A student must be challenged and supported. If the challenges or disequilibrium is too great, the individual retreats; if the supports are too protective, the individual fails to develop (Sanford, 1966). Aulepp and Delworth (1976) referred to this "optimal incongruence" as "fit." The more appropriate the incongruence between the person and the environment, the

greater the growth. This approach acknowledged the environment as a potent determinant of human behavior and encouraged the evaluation of this interaction as a way to measure student development and the impact of programs and services. While many student personnel professionals responsible for residence halls have described the environments they create for students, it is unfortunate that only a few have determined the degree of student-institution fit. Even fewer have measured this "fit" as a way of evaluating the impact of residence halls on students.

BACKGROUND

Proponents of this "fit" concept referred to this approach to personal growth as "student-environment interaction" or "campus ecology" (Aulepp & Delworth, 1976). This school of thought developed in the student protests of the late 1960s when student dissatisfaction grew rapidly. Traditional student personnel services failed to respond to requests by students to reconsider its stance on in loco parentis. As a result, disagreements between students and administrators over what types of behavior (i.e., student conduct) would be accepted on the college campus (i.e., environment) were mediated frequently in the courts (Brubacher & Rudy, 1976). The movement grew as higher education opened its doors to new and diverse student groups. It became clear

to some then that "the environment" as well as the student would have to change to accommodate different types of students (Banning, 1985).

The student-environment interaction viewpoint has been translated into several models and applied on college campuses (Paul, 1980). A review of these models appears in Chapter 2 of this report. Generally, these models either described the relationship between the student and the environment or identified the elements that can be modified to improve the nature of the interaction. While the literature outlined the various processes by which environments can be structured to fit student and institutional needs, few studies investigated the relationship between fit and student development.

One reason for the neglect of fit was that person variables and environment variables typically were constructed from separate conceptual schemes. When they were examined together there was no conceptual overlap (McReynolds, 1979). One particularly valuable tool for examining the psychosocial aspects of environments, which may be adapted for conceptually similar assessment of personal variables, is the University Residence Environment Scale (URES), developed by Moos and Gerst (1972). Tracey and Sherry (1984) recently derived scores for person-environment fit from subscale scores on Form I and Form R of the URES. Form R measured the real environment as experienced by residents. Scores from Form R

served as measures of the environment. Scores on Form I were treated as measures of a person's wants, needs, and desires. The discrepancy between the subscale scores on Form R (real) and Form I (ideal) provided a measure of person-environment fit according to Tracey and Sherry (1984). This derived score offered several advantages over other student-environment fit measures since it considered person and environment factors in a conceptually similar format. This measure overcame several of the limitations of other "fit" scores and was of great help to researchers investigating the relationship between student-environment fit and the development of college students.

STATEMENT OF THE PROBLEM

Few purposely structured environments in the university setting provide so rich a potential for understanding the social/psychological forces influencing student behavior and growth as does the residence setting (Pascarella & Terenzini, 1982). While numerous studies have attempted to explain the impact of the residential setting on students, questions continue to be raised about effects of the residence life experience on student development.

Blocher (1978) suggested that the developmental processes are not automatic, but that they must be purposefully triggered and carefully nurtured by the environment if po-

tential for growth and development is to be reached. While many have used "student-environment" models to describe this interaction, few investigated how this "fit" affects student development and academic achievement.

Student affairs professionals need to strengthen their programs and services in residence halls and develop better methods of evaluation. In particular, these professionals need to demonstrate the effect of their efforts on the interpersonal and intellectual development on resident students. This study addressed this issue by determining the relationship between student-environment fit and sense of competence as defined by Chickering (1969), determining the relationship between student-environment fit and the academic achievement of freshmen, and testing newly derived measures of that fit.

PURPOSE OF THE STUDY

Paul indicated that many have attempted to examine the effects of the student environment fit in broad terms by measuring a number of variables in a number of different student settings. He indicated that "it makes more sense to concentrate on more circumscribed projects (1980, p. 77)." Further, he suggested that one's focus should be limited by: (a) selecting a specific problem to address or a specific accomplishment to foster and, (b) narrowing the setting and

population to be considered. The purpose of this study was to assess the student-environment fit in residence halls and to assess how fit affects the sense of competence and academic achievement of freshmen. Environmental fit was broken down into three major components representing a distinct relationship between the student the environment: (a) Relationships, (b) Personal Growth and Development and, (c) System Maintenance and Change.

ASSUMPTIONS

This study was founded on four major assumptions: (a) behavior is partially a function of the interaction between an individual and the environment, (b) the student-environment fit is a measure of that interaction, (c) an individual's growth is partially triggered and nurtured through one's interaction with the environment and, (d) the more appropriate the "student-environment fit" the better the opportunity for growth.

RESEARCH QUESTIONS

The following questions guided this research:

1. What degree of fit exists in the Relationship dimension of the social environment in residence halls as measured

by the difference in the sample's Form R and Form I scores on the Involvement and the Emotional Support subscales of the URES?

2. What degree of fit exists in the Personal Growth and Development dimension of the social environment in residence halls as measured by the difference in the sample's Form R and Form I scores on the Independence, Traditional Social Orientation, Competition, Academic Achievement, and Intellectuality subscales of the URES?

3. What degree of fit exists in the System Maintenance and Change dimension of the social environment in residence halls as measured the difference in the sample's Form R and Form I scores on the Order and Organization, Student Influence, and Innovation subscales of the URES?

4. What is the relationship between the sample's discrepancy scores on the URES subscales and the sample's sense of competence scores?

5. What is the relationship between the sample's discrepancy scores on the URES subscales and the sample's grade point averages?

SIGNIFICANCE OF THE STUDY

Although student personnel professionals have endorsed models of human behavior that address person-environment fit (Barker, 1968; Clark & Trow, 1966; Holland, 1973; Pervin, 1968; Stern, 1970; Walsh, 1973), research has centered on the person or the environment but neglected "fit." The significance of this study was that it: (a) assessed the student-environment interaction in residence halls at a large comprehensive university using newly derived "fit" scores, (b) assessed the relationship between fit and competence among freshmen, (c) assessed the relationship between fit and academic achievement of freshmen and, (d) offered specific recommendations on how the fit between the student and the environment might be improved.

DEFINITION OF TERMS

The following terms were defined specifically for the purpose of this study:

1. Student-Environment Fit - The degree to which student expectation of the environment matched the student experience as measured by the discrepancy scores derived from the University Residence Environment Scale (URES).

2. Sense of Competence - Scores on the sense of competence scale described below.

3. Sense of Competence Scale - A survey instrument designed to measure intellectual and interpersonal self-confidence. A copy of which appears as items 81-103 in Appendix A.

4. University Residence Environment Scale (URES) - An instrument designed to describe the social and emotional environment found in residence halls. The scale was divided into three major categories and ten subscales.

5. Real Subscale Score (RS) - The measure used to define the respondent's report of the current environment in the living unit (Form R).

6. Ideal Subscale Score (IS) - The measure used to define the respondent's report of what the ideal living environment should be (Form I).

7. Actual Discrepancy Score (ADS) - A measure used to define the degree of consistency expectation or "fit" between the person and the environment. A Resident's Ideal subscale score minus the mean score for all students in a living unit for each of ten subscales.

8. Perceived Discrepancy Score (PDS) - A measure used to define the degree of consistency expectation or "fit" between the person and the environment. Respondents' Ideal score minus the respondent's Real score on each of the 10 subscales.

9. Academic Achievement - The respondent's current overall grade point average as recorded on a four point scale by the Registrar's Office was used as the measure of academic achievement.

LIMITATIONS

The study was limited to freshmen housed in residence halls at a large, comprehensive university in the southeast with an undergraduate population of approximately 18,000 and a freshmen class of 4,280. Freshmen were selected because their scores on the URES were more likely to reflect student-environment fit resulting from their experience with a new environment as opposed to their upperclass counterparts whose scores may reflect their knowledge of other institutions or other life experiences.

This study used a modified form of the URES and discrepancy scores to determine person-environment fit which may affect the reliability and validity of the URES. The standard URES used a true-false response format. For purposes of

this study, a 4-point Likert scale was used as suggested by Tracey and Sherry (1982). It is acknowledged also that the residence hall environment is not closed. Other experiences and other environments (i.e., the home and the classroom) may confound the findings in this study.

OUTLINE OF REPORT

Chapter 2 contains a review of literature which will include an overview of the development of the student-environment fit approach to evaluation in student affairs, an explanation of the theoretical framework for the study, and a review of related research on residence halls. Chapter 3 includes an explanation of the research design, choice of instrumentation, and a review of the sampling procedures and statistical techniques used. The results are presented in Chapter 4. Finally, the summary, conclusions, and recommendations of the study are presented in Chapter 5.

CHAPTER 2

The attention paid to the importance of the campus environment in promoting the development of college students has increased over the last several years (Banning & McKinley, 1980). Hurst (1974) presented the notion of counseling dimensions that included full recognition of the importance of the environment in the development of intervention strategies. Banning and Kaiser (1974) provided a systematic way to look at student development through their "ecosystem model." The management of the environment to promote student development was suggested by Miller and Prince (1976) and Aulepp and Delworth (1976). Campus ecology as a perspective for student affairs was suggested by Banning (1978, 1980). Throughout their publication on student services, Delworth and Hanson (1980) gave strong support to the importance of the environment. Parker (1978), in his work on encouraging development in college students, suggested that one of the most important issues in counseling psychology is determining the role that the environment plays in development. Despite the recent progress that has occurred, more research is needed to better understand this dynamic (Banning & McKinley, 1980).

This review of the literature outlines the development of this interactional approach in higher education settings,

summarizes the major models connected with this perspective, and reviews the related student-environment research previously conducted in the residence halls.

THE DEVELOPMENT OF INTERACTIONISM

Paul (1980) suggested that three major theoretical positions have been developed to explain human behavior. These were defined as: (a) personologism, (b) situationalism, and (c) interactionism. He referred to personologism as the position that held that actions of individuals are primarily directed by internal factors such as traits, personality, and dispositions. Individuals behave consistently regardless of all other factors. Situationalism stressed that events or factors in the social or physical environment outside of the person control behavior. Behavior changes from setting to setting. The interactionism positions contended that neither of the first two positions account for all behavior. This third approach integrated the other two, and suggested that the way in which both person and environment factors act together or interact, determined how an individual will behave.

While the notion of the interaction between the person and the environment often was written about as a new discovery, the concept dates back through the ages. Shute (1973) reported that interactionism can be traced back to Aristotle. Within the field of psychology, interactionism existed for

several decades. Kantor (1924) was perhaps the first early proponent of the person-environment interaction perspective when he strongly advocated that behavior should be studied as the mutual interaction of the organism and the various situations in which it behaved.

Lewin also strongly influenced the thinking of subsequent interactionist theorists. He developed what he referred to as the "field" view which conceived of the situation, including the individual, as a whole. According to Lewin (1936, p.12),

> In psychology one can begin to describe the whole situation by roughly distinguishing the person (P) and his environment (E). Every psychological event depends upon the state of the person and at the same time on the environment, although their relative importance is different in different cases. Thus, we can state our formula B=f(S) [Behavior is a function of the situation] for every psychological event as B=f(PE) [Behavior is a function of the person interacting with the environment].

Murray (1938) developed a "needs/press" theory in which he suggested that persons be described in terms of their needs and wants; in a parallel sense, he suggested that the environment be defined in terms of its role in the frustration or satisfaction of those needs. He referred to the environment as the "press."

The rise in behaviorism as an important psychological theory also resulted in research which documented the power of the environment in producing and controlling behavior. The work of Watson (1958) and Skinner (1953) supported the

views of those who believed that the "social culture" or "environment" shaped behavior. As Ekehammar (1974) indicated, the interactionist hypothesis was not directly tested until developments in experimental methodology were made. Advances in analysis of variance techniques made direct examination of the relative contributions of the person (P), the environment (E), and the interaction (P X E) possible. This examination resulted in a number studies which supported the notion that interactions among modes of responses, situations, and persons were more important in producing variations in behavior than were any of the individual sources (Huebner, 1980). Based on these studies and others, Ekehammar (1974) concluded that the interactionist perspective was the most compelling of the three major theoretical positions proposed to explain human behavior.

MODELS OF INTERACTIONISM

Two basic types of models were defined by Paul (1980). Prescriptive/intervention models identified elements of the student-environment interaction that can be modified to improve the nature of the interaction. Descriptive/research models, on the other hand, described the relationship between the student and the environment and were used to test assumptions about that relationship.

Prescriptive/Intervention Types

Prescriptive/intervention models focused on needed changes in the interaction as a common characteristic. They guided assessment and change. All of these models held the common view that the student-environment interaction must be considered before any intervention can prove successful.

Two of these models developed from common ancestry. Their theoretical framework arose chiefly from work stimulated at the Western Interstate Commission for Higher Education (WICHE). This perspective came to be known as the ecosystem model. Early advocates hoped to intervene on campuses by designing or redesigning campus environments to meet the needs of students rather than fitting students to existing environments. Their ultimate goal was to produce greater congruence or fit between the student and the environmental elements of the interaction.

The Ecosystem Model

The theoretical assumptions of the ecosystem perspective were translated into a rudimentary model by Aulepp and Delworth (1976). This five-stage model is worth describing since most of the prescriptive/intervention applications arose from it. It was intended to lead to the identification and elimination of dysfunctional features of the environment

and to the promotion of those environmental features which enhance student growth.

Stage 1 entailed obtaining support and commitment from key administrators who were ultimately responsible for assessing and creating environments. The creation of a representative planning team was an important part of this step as well. In stage 2, the planning team identified a list of common concerns or areas of inquiry. These topics were translated into an assessment instrument or survey in stage 3. The instrument was usually designed so that respondents were asked to identify what caused the problem and to make recommendations on how to solve the problem. The instrument was administered in stage 4 of the process. The information collected from the survey was then analyzed to identify problems that were reported by large numbers of the sample. Intervention, follow-up, and reassessment made up the last stage of this model.

The basic ecosystem model, with some variations, has been applied to a number of different settings on college campuses. Huebner (1979) compiled descriptions of the use of the model in two residence hall settings, a university medical school, the office of a dean of student affairs, and throughout an entire university system. Daher, Corazzini, and McKinnon (1977) reported on the use of a modified ecosystem model in their Residence Environment Assessment Program. Each of these applications successfully reduced

discrepancies in student-environment congruence and served as examples of the assessment/intervention process derived from the ecosystem model.

Ecomapping Model

The ecomapping model developed by Huebner and Corazzini (1976) provided a second approach to intentional campus design. In this approach, the student was seen as the processessor of needs that must be met largely through external resources; the environment was conceived of as the potential source of those potential resources. Students engaged in a process called "mapping" to discover those parts of the environment that would fulfill needs. The degree to which there were matches and mismatches between the student's successful location and use of resources to meet needs determined congruence or fit.

Huebner and Corazzini contended that their approach differed from the ecosystem model in a significant way. They proposed a variety of assessment methods. In addition to self-report data, the ecomapping model utilized questionnaires, interviews, and observations to construct a more comprehensive representation of the environment. While the ecomapping model attended to more variables than the ecosystem model in that sense, the added complexity made it very difficult and time-consuming to apply. As a result

there has been very little use of this model as a whole (Paul, 1980).

While both models, and models like them, assisted researchers in investigating a wide range of variables, these models were less systematic in relating to behavioral outcomes. They were excellent tools for developing and implementing planned change on college campuses (Banning, 1985). However, more specific models are needed to investigate the impact of the student-environment interaction.

Descriptive/Research Type

Recent interest and research in the student-environment interaction was stimulated by several descriptive/research models which defined this interaction and its impact on behavior and development.

Barker's Behavior Setting Theory

Barker's theory (1968) of behavior setting suggested that both the individual and the environment must be taken into account when attempting to predict behavior. The concept of behavior settings (environments) structured the rules for the enactment of behavior. He suggested that people tend to behave in highly similar ways in specific environments, regardless of their individual differences as persons. Thus,

environments seemed to have a coercive influence upon human behavior. His work emphasized the environmental component and the effect of the environment upon behavior. Evidence indicated that behavior settings influence behavior of their inhabitants (Walsh, 1978).

Clark & Trow's Subculture Model

In this model four student subcultures were identified (academic, non-conformist, collegiate, and vocational). The environment in the Clark-Trow model (1966) was conceptualized in terms of these subcultures and attempts to describe the environment and the impact of the environment on behavior. This subculture model described the environment in terms of attitudes, values, behaviors, and the roles of its members. Its major premise was that while students participated in more than one subculture, only one or two of these subcultures identified a student's major orientation toward environments. Newcomb (1969) and Walsh (1973) indicated that students describing themselves according to the four orientations tended to report differences on attitudinal and biographical variables.

An implicit assumption about the person-environment relationship was that people tended to enter and participate in environments consistent with their personal characteristics. No research using the Clark-Trow model showed that

students endorsing a common orientation actually interacted with students in the same subculture. Research data tended to describe student types rather than subcultures (Walsh, 1978).

Holland's Theory

The underlining rationale of Holland's theory was that human behavior was a function of personality and environment. Holland (1966) suggested that people may be characterized by their resemblance to one of six personality types and that each person behaved in a manner which reflected one or two of these types. The closer an individual resembled a particular type, the more likely it was that that person exhibited personal characteristics consistent with that type. Secondly, he suggested that there were six environmental models which correspond to the six personality types. His final assumption was that congruent person-environment interactions (a match between personality type and environmental model) led to predictable and understandable outcomes. This approach emphasized the person rather than the environment.

In general, research based on this theory supported the existence of personality types and environmental models. Evidence indicated that individuals tended to choose environments consistent with their personality types and that

congruent interactions between the person and environment were associated with reported personal and vocational stability, self-esteem, and satisfaction (Walsh, 1978).

Moos' Social Ecology Approach

Moos (1974) suggested in his approach that environments, like people, have unique personalities. Just as it was possible to describe an individual's personality, so was it possible to describe and characterize environments.

Moos based his approach on two basic assumptions. First, psychosocial qualities of the environment may be inferred from behavioral perceptions. Thus, Moos seemed to be primarily concerned with describing environments as perceived by the people in them. Secondly, Moos contended that the way one perceived the surroundings influenced the way one behaved in that environment. He argued that environments shape potentials as well as facilitated or inhibited initiative and coping behavior.

Research suggested that certain common dimensions tended to exist across different kinds of environments (Moos, 1974). Studies showed that the consensus of individuals characterizing their environmental climate exerted a directional influence on behavior (Smail, Deyoung, & Moos, 1974).

Summary

These descriptive models have aided researchers in investigating a narrow range of person and environmental variables on student behavior. The degree of emphasis on the person or the environment shifted with each model and each addressed the issue of interaction in a slightly different way. While it was clear that the concept of person environment interaction has not yet fully developed as a as a full-fledged general theory, each model has stimulated some meaningful research.

Moos' social ecological approach was particularly useful for purposes of this study. First, the URES, one of several instruments developed by Moos was designed to measure the residence hall environment specifically. Second, Moos' social ecology approach concerned itself with promoting the development of students (Walsh, 1978). Third, the adaptation of the URES allowed for the derivation of a relatively new measure of student-environment fit. These concepts reflected the essence of campus ecology and the importance of fit.

SOCIAL ECOLOGY RESEARCH IN THE RESIDENCE HALL SETTING

Students change considerably during their college years. Generally, they develop more positive self-images and show

less interest in religion status, and other traditional values (Bowen, 1977). Astin (1977) argued that many of these changes were attributable to the impact of college rather than to maturation. Resident students changed more than commuter students, students with high interpersonal involvement on campus changed more than those with less involvement, and students who stayed in college for four years changed more than those who dropped out (Moos, 1979). The study of differential impacts of various living groups on freshmen students' personal and social development has been the subject of much research.

Academic Achievement

Numerous studies were reported in the literature that deal with housing environments and academic achievement. Most of these studies were confined to an examination of the residential effect on grades (Phillips, 1976). A number of studies compared grades of students living in several different types of housing. Comparing students residing in residence halls, in fraternity houses, at home, and off-campus, Prusok and Walsh (1964) found no significant achievement differences when ability was controlled. Kaludis and Zatkin (1966) and Willingham (1962) also reported that fraternity residence did not seem to influence grades. Schroeder and Sledge (1966) similarly discerned no consistent

and conclusive connection between grades and place of residence.

Subsequent researchers have attempted to establish such a connection, but with inconsistent results. Astin (1973) reported that students living in residence halls or private apartments and rooms were more likely to attain a high grade point average and apply to graduate school than students living at home. An interpretation of Astin's results was complicated, however, by his method: he assigned his subjects to three residential categories during their freshmen year, but his follow-up was not done until the students were seniors. Any number of influences, including a change in residence, could have affected his findings. Hountras and Brandt (1970) matched students by ACT scores and class standing and found that "students living in university residence halls had significantly higher mean grade point averages than those students residing at home or off campus" (p. 354).

A number of studies have sought to determine the affect of various groupings of students within residences on grades. Assigning one group of first-year students to freshmen-only residences and another group to residence halls housing both freshmen and upperclassmen, Beal and Williams (1968) reported no significant differences in grades between the two first-year groups. Hebert (1966), however, discovered that such an arrangement did affect the two upperclass groups

involved: a group of upperclassmen segregated from freshmen received higher grades than their mixed-class counterparts.

Grouping students by academic major yielded no significant achievement differences (Morishima, 1966). Snead and Caple (1971), however, came to the conclusion that a "congruent" grouping of students by major did influence their academic achievement. Academic majors were grouped according to a six-category classification system proposed by Holland (1966). The authors hypothesized that students in congruent environments would fare better academically than students who found themselves in minority categories. The results supported the hypothesis for both male and female groups.

Students of high ability, when grouped together, were found to achieve greater academic success than high-ability students whose residences were randomly assigned (DeCoster, 1966, 1968). DeCoster (1966) also reported that students were more successful academically than another group of students living near the high-ability students who were grouped together. More recently, Duncan and Stoner (1977) investigated the affects of grouping high-ability students in a scholar residence hall. While the mean grade point average of the students residing in this residence hall was not significantly higher than the mean grade point average of those living elsewhere, the authors found that there appeared to be some positive affects on academic achievement, thereby providing support for housing high-ability students together.

Several researchers have investigated the affects of assigning three students to a standard double room (i.e., a room with a normal capacity of two) on academic achievement with consistent results. Academic performance did not suffer when students were assigned in groups of three to standard double rooms. Seven studies (Maurais, 1968; Severinsen, Viviano, & Hopkins, 1970; Yager & Gabriel, 1972; McLaughlin, Stull, & Montgomery, 1973; Baron, Mandel, Adams, & Griffin, 1976; Hallenbeck & Balswick, 1978; and Parsons, 1982) found no significant relationship between grade point average and the number of people assigned to a residence hall room. In fact, a recent study by Desler and North (1978) suggested that students living in expanded housing may even do better academically than either student living off campus or those living in rooms with only two occupants.

Coeducational Living

Coeducational housing has become popular on many college campuses. Its impact on college students has been the subject of debate and study. Brown, Winkworth, and Braskamp (1973) found that the social environment in coed residence halls fostered a more casual type relationship between men and women, fewer strictly "masculine" interactions between males, and fewer formal dating activities. Reid (1974) found that women in coeducational residence halls were more posi-

tive about their self-images, had less stereotyped images of femininity, and showed more interest in their careers than their female freshmen counterparts in non-coed buildings. Schroeder and LeMay (1973) concluded that the social environment in coeducational residence halls facilitated interpersonal growth and the development of mature relationships.

The social environment in coeducational residence halls did affect some students negatively, however. Moos and Otto (1975) reported that students in coed buildings used the health center more frequently than their counterparts in single sex units and found that 17 percent of the women in coed units either dropped out of school or moved out of their living unit. They concluded that despite many of the positive effects of this environment, some stress may also be generated. This stress may have been attributable to the diverse nature of the students and the divergent goals found among the students living in this environment.

Personal Development

The social ecology of residence halls also has influenced student growth. Chickering's (1969) seven vectors of development has been used to measure this change. Halls which support independence and achievement maintain and enhance residents' aspirations and achievement levels and encourage the development of competence and the clarification

of students' purpose and goals; two important developmental tasks for college students. Social environments in residence halls which foster active styles of coping with college life (involvement and emotional support) have affected such developmental tasks as achieving competence, establishing identity, and developing more open interpersonal relationships (Moos, 1979). While Astin and Panos (1969) found that the education and vocational development of college students depended primarily on personal characteristics and family background, these findings indicate the need to consider the connection between the living group and the personal development.

Physical and Architectural Features

A number of researchers have asked the question, "Can architectural characteristics influence the social environment in residence halls?" The answer seems to be, yes. For example, Bickman, Tegar, Gabrieie, McLaughlin, Berger, and Sunaday (1973) found that smaller low-rise residence halls were seen as more cheerful, friendly, relaxing, spacious, and warm than large high-rise facilities. In addition, aspects of the social environment, such as cohesion and support, mediated the adverse effects of stressful environments created by physical structures. Although cohesive student groups were less likely to form in crowded residence hall setting,

for example, they markedly reduced the degree of stress experienced when they do form (Baum & Valins, 1977).

Moos (1979) reported that the architectural characteristic with the most pervasive relationship to social climate was the proportion of single rooms in the living unit. Living groups with a larger proportion of single rooms were oriented more toward competition and less toward supportive achievement, independence, intellectuality, and relationships. It appeared that housing students in single rooms inhibited social interaction and a feeling of friendship, a concern for others in the hall, open and honest communication, and planning for new activities. Larger living groups were less likely to develop supportive achievement or independence oriented social environments.

Ford (1975) compared small, medium, and large residence halls and found that students in small halls saw more emphasis on involvement, emotional support, academic achievement, order and organization, student influence and innovation. These results supported the idea that more cohesive and satisfying social environments develop in smaller living groups. Size may not always be strongly related to living group social climate. Negative affects, such as less overall friendliness and cohesion, were offset by other positive affects, such as greater student diversity and heterogeneity.

Gerst and Sweetwood (1973) used the URES to study the extent to which the social environment in suites differed

from that in the traditional large residence hall. Suites were seen as much more involving, supportive, student controlled and innovative than traditional residence halls with rooms on each side of long hallways. Furthermore, it was found that the smaller size of the living unit allowed students to plan and organize a wider range of activities and to experiment with innovative styles of relating to one another. Although the results indicated that more cohesive and student-controlled social environments developed when students were housed in suites, significant interpersonal problems, such as lack of privacy and isolation, arose when an "incongruent" student was placed in the suite. Null (1981) also examined the influence of a suite arrangement on the social environment in residence halls. She concluded that the suite environment provides opportunities for friendship formation and security. The results of this study indicated that, in general, residents found suites to increase involvement and provide support. Increased cohesiveness was reported to be both a positive and a negative. This finding tends to support the work done by Gerst and Sweetwood.

Physical Crowding

Spencer (1979) reported that high-density housing may have some negative impact on resident students. Bickman, et al. (1973) found that the greater the number of students

housed in a residence hall, the less the amount of helping behavior exhibited by the residents. An explanation for this phenomenon comes from the work done by Daniels and Berkowitz (1963), Feldman (1968), and Midlarsky (1968), whose research showed that helping behaviors increased as one found the person needing help becoming more attractive and as one felt more of a sense of identity with that person. In high-density residence halls, there was less identification with the living group and its members; thus, it was quite logical that less helping behavior would be displayed in these facilities.

Stoner and Thurman (1978) also reported that helping behavior was adversely affected by greater density. Because high-rise residence halls house so many people in one area, they create situations in which the people living in them choose not to help others as often as those in lower-density halls. It may be that residents in high-rise facilities did not feel a sense of identity with each other and, consequently, were less willing to help each other.

Another area of research on crowding in residence halls involved studies of expanded occupancy. Known variously as "extended," "overflow," "emergency," or "temporary," housing, these accommodations permitted housing officers to accommodate more students than normal occupancy would allow without having to build additional residence halls. The results of these studies were not always consistent. On the

positive side, several studies found that living in motel rooms which were used as residence hall space and double rooms which were expanded to accommodate three occupants did not have a negative impact on students' overall adjustment to college life (Goldman, 1966; Severinsen, Viviano, and Hopkins, 1970). In another study, Yager and Gabriel (1972), in comparing students in standard double rooms with those in tripled doubles, identified no differences in students' social participation, organizational participation, academic satisfaction, or personality adjustment.

Some studies identified negative findings, however. Students in triple rooms expressed less satisfaction with their living space, privacy, and degree of perceived control over room activity than did students in standard double rooms. Similarly, when tripled students were compared to those in standard rooms, tripled students reported less satisfaction with their roommates, spent less time in their room, and tolerated closer distances of interaction with friends than they do with roommates.

Perhaps the most interesting aspect of this research was that relating to gender differences. In short-term social situations, men tended to react more negatively than women to crowded situations. Freedman, Levy, Buchanan, and Price (1972) found that, in crowded situations, males liked each other less and became more competitive and aggressive; females showed the opposite orientation. In another study,

males rated themselves and others more positively in an uncrowded situation, whereas females gave more positive evaluation in a crowded situation (Ross, Layton, Erickson, & Schopler, 1973). A study by Stokols, Rall, Pinner, and Scopler (1973) again showed that males may tend to be more uncomfortable in a small room than females.

Physical Well-Being

Researchers demonstrated considerable interest in the relationship between the social environment and physical well-being. Evidence indicated that social-environmental factors were related to psychophysiological processes. Increased support, cohesion, and affiliation in a living units were thought to enhance normal development and reduce recovery time from illness. Increased competition, work pressure, responsibility, and time urgency in a living unit increased the likelihood of stress and disease (Kiritz & Moos, 1974; Moos, 1979). Moos and Van Dort (1977) also found that the social environments of living groups in which students complained more about physical ailments were low in involvement, emotional support, and student influence and high in competition. These units lacked a sense of locality and cohesion and were low in student participation and activities. Other findings indicated that environments which emphasize competition and responsibility but failed to provide sufficient

social support tended to foster dissatisfaction and strain. Kaplan, Casel, and Gore (1977) noted that social support is important in ameliorating stress and promoting health. They concluded that social supports protected a person from the effects of noxious psychosocial stressors. Bruch (1977) also found students who were more likely to complain of physical ailments evidenced poor social adjustment to their college environment.

Summary

All of these studies examined the impact of the social environment of residence halls on students. All used an analysis of variance or regression in their statistical analysis as suggested by Moos (1979). While these studies have contributed to what we know about social ecology in residence halls in important ways, they focused on the impact of the environment on the person directly. None of these studies investigated the affect of the fit between the student and the environment.

CHAPTER 3

DESIGN OF THE STUDY

This study assessed the relationship between student-environment fit and two dependent measures: the sense of competence of freshmen and their academic achievement. The study was expost facto in nature.

The URES short forms were used to assess the residence hall environment and determine the person-environment fit. Participants were asked to respond to 80 items describing residence hall life. On 40 items, participants were asked to comment on the environment as they experienced it (Form R). On 40 similar items, they were asked to respond to how the floor ideally should be (Form I). The scores were used to form "perceived discrepancy scores" and "actual discrepancy scores" for each of the three major dimensions and ten subscales on the URES. The major dimensions were: (a) Relationship, (b) Personal Growth and Development and, (c) System Maintenance and Change.

The involvement and emotional support subscales were conceptualized as the Relationship dimension, assessing the extent to which residents support and help each other and the extent to which these groups were involved in hall activ-

ities. Essentially, these subscales measured the types and intensity of personal relationships among students.

The second group of subscales were conceptualized as Personal Growth or Development dimension. They measured the emphasis within the hall environment upon the maturation process. Independence and traditional social orientation subscales measured the emphasis on personal and social maturation, while competition, academic achievement, and intellectuality subscales assessed the emphasis on different aspects of academic growth.

The last three subscales of order and organization, student influence, and innovation were conceptualized as assessing the System Maintenance and Change dimension. This dimension was system-oriented in that it tapped into information about the structure of organization within the hall as well as the process and potential for change in its functioning. A brief description of each URES subscale can be found in Table 1. The individual survey items which made up each subscale are shown in Appendix B.

Because the URES used a true-false response format and only four items loaded on to each subscale, too little variability resulted when deriving fit scores. To compensate for this, a 4-point Likert-type scale ranging from strongly disagree to strongly agree was developed for each item. Comery and Montag (1982) suggested that such a modification improves the reliability of an instrument since Likert-type responses were

Table 1

Brief URES Subscale Descriptions

Involvement	Degree of commitment to the floor and residents; amount of interaction and feeling of friendship on the floor.
Emotional Support	Extent of manifest concern for others on the floor; efforts to aid one another with academic problems; emphasis on open and honest communication.
Independence	Diversity of residents' behavior allowed without social sanction, versus socially proper and conformist behavior.
Traditional Social Orientation	Stress on dating, going to parties, and other "traditional" heterosexual interactions.
Competition	The degree to which a wide variety of activities such as dating, grades, etc., are cast into a competitive framework.
Academic Achievement	Extent to which strictly classroom and academic accomplishments and concerns are prominent on the floor.
Intellectuality	Emphasis on cultural, artistic, and other scholarly intellectual acitivities on the floor, as distinguished from strictly classroom activities.
Order and Organization	Amount of formal structure or organization (e.g., rules, schedules, following established procedures, etc.) on the floor.
Student Influence	Extent to which student residents (not staff or administration) perceive they control the running of the floor; formulate and enforce rules, control the use of money, select staff, roommates, policies, etc.
Innovation	Organization and individual spontaneity of behaviors and ideas; numbers and variety of activities, new activities.

found to be more reliable than the dichotomous true-false formats. Permission to adapt the URES in this manner was obtained from the developers of the instrument, Consulting Psychologists Press, Inc. As the literature review indicated, little research focused on student-environment fit. One reason for this neglect was that "person measures" and "environment measures" were typically designed by using separate conceptual schemes, and when they are examined together there is no conceptual overlap (McReynolds, 1979). Most measures of person-environment fit that were available in the literature were not applicable for this study.

One potentially valuable tool for examining the psychosocial aspects of environments, which may be adapted for a conceptually similar assessment of personal and environmental variables, was the University Residence Environment Scale (URES) developed by Moos and Gerst (1972). Tracey and Sherry (1984) suggested that scores for the person-environment fit can be derived from subscale scores from two separate forms of the URES. Form R of the URES measured the "real" environment as perceived and experienced by residents. Form I contained the same items asked from the perspective of what the respondent perceived to be the "ideal" situation. For the purposes of this study, scores on Form I were treated as measures of a person's wants, needs, and desires and were used to represent the person. The "fit" was derived by combining the "real" and "ideal" scores.

Tracey and Sherry suggested two ways of deriving this fit score. The first method involved calculating the difference between each respondent's ideal and real ratings on each of the URES subscales. They referred to the difference between these two scores as a "perceived discrepancy" because it reflected students' perception of what is and their perception of the "ideal." Moos (1979) noted, however, that individual ratings of the environment were not always the most accurate. The second method suggested for deriving fit scores was to calculate the mean ratings of the participants' Form R scores and subtract it from the individual's Form I scores. Tracey and Sherry suggested that this consensus rating was a more valid reflection of the actual environment because it was less subject to individual variation. The differences between an individual's ideal rating (Form I scores) and the mean rating of students living together in the same environment (Form R scores) yielded more accurate information on how an individual actually fits in the environment. This second measure was referred to as the "actual discrepancy" score because it assessed the extent to which one's preferences fit with the actual environment. This rationale was supported by other studies. Pascarella and Terenzini (1982) proposed similar variables in assessing the impact of residential units and student fit on student achievement and retention. Tracey and Sherry (1984) found this second measure to be superior to the perceived discrep-

ancy score and to person and environment measures when used alone. Both discrepancy scores were examined in this study and were used as independent measures. The relationships between student-environment fit and sense of competence, and student-environment fit and academic achievement were examined through the use of multiple regression. Sense of competence scores and overall grade point averages of the respondents calculated at the time the survey was conducted were used as dependent measures.

Items on the sense of competence scale were adapted from the 1982 form of the Student Information Form developed by the ACE/UCLA Cooperative Institutional Research Program and the Personal Orientation Inventory (Shostrom, 1963). Grade point averages were obtained from student records and were based on a 4-point scale.

POPULATION OF THE STUDY

This study was limited to freshmen students housed in residence halls at a single institution. The population numbered 4280 freshmen. A stratified sampling technique was used to identify the sample. A total of 7 buildings were selected from the 20 facilities in the residence hall system studied. This sample included 10 separate floors selected from the 96 floors contained in the total system. The housing pattern was the same for all floors in the residence hall

system. Each floor consisted of double rooms on each side of the hallway. Freshmen and upperclass students were housed on the floors in almost equal proportions.

A total of 600 freshmen or 14.1% of the freshmen class were included in this study. Of the sample, 295 (49.1%) were male and 305 (50.9%) were female. A total of 338 (56.3%) lived in residence halls with capacities greater than 350. The remaining 262 (43.7%) lived in smaller buildings.

INSTRUMENTATION

The University Residence Environment Scale (URES)

Validity

Some evidence of URES content validity was obtained by Moos and Gerst (1974). They conducted semi-structured interviews and evaluated feedback from questionnaires given to students and staff in eight different settings. The interviews covered residents' impression of their own living groups in each of the ten subscales areas evaluated by the URES. The authors claimed that the results of these interviews showed close agreement between the residents' description of the setting and the results provided by the URES. No statistics were offered. Another study found that descriptions of residence hall settings given by staff, pre-

vailing notions about a particular residence hall, and descriptors printed about residence halls in student brochures fit URES profiles (Goebel, 1976).

The subject of concurrent validity was addressed by Moos (1979) and Frichette (1976). Moos studied 52 living groups and found that student in living units who scored high on the URES emotional support subscale reported more supportive interaction and that students who scored high on the URES intellectuality subscale reported engaging in more cultural activities. Frichette's study indicated that scores on the traditional social orientation subscale were related to formal dating activity. Moos (1979) indicated that these results provided some evidence of the validity of the URES.

Reliability

Information on the reliability of the URES (Form R) was found in the URES Manual (Gerst & Moos, 1974). Subscale internal consistencies calculated using the Kuder-Richardson Formula-20 ranged 0.88 to 0.77 with a mean internal consistency of .82. The mean of the subscale intercorrelations was 0.18 suggesting that the subscales measured diverse aspects of the social environment.

Gerst and Moos measured the stability of individual responses by administering the URES to the same subjects (N=83) living in one men's and one women's residence hall at a pub-

lic university on three separate occasions. The test-retest correlations ranged from .67 to .75 after one week and from .59 to .74 after one month. The stability of overall URES profile was computed for the same two residence halls using the interclass correlation. The interclass correlation for the men's residence hall was .96 after one week, and .86 after one month. The interclass correlation for the women's residence hall was .96 after one week and .98 after one month.

The 40-item URES Short Form (Form S) was used in this study. Interclass profile correlations were calculated between the ten Form R subscales and the ten Form S subscales for a sample of 82 living groups using standard scores (Gerst & Moos, 1974). These 82 living groups represented individuals living on separate floors in various college residence halls. No additional demographic information on these groups was found. These correlations assessed the similarity of the URES profile based on only four representative items from each subscale (Form S) and the profile based on all the items in each subscale (Form R). The interclass correlations between the two forms were above .90 for 76 of the 82 groups. No unit showed a correlations below .86. This was interpreted to mean that the Short Form of the URES was an effective representation of the longer version.

The Sense of Competency Scale

Chickering (1969) defined sense of competence as a feeling of self-confidence about one's interpersonal and intellectual skills. A thorough search for an instrument designed to measure sense of competence proved unsuccessful. While a number of tests and inventories measure wide ranges of personality characteristics, none were found that dealt satisfactorily with Chickering's notion of sense of competence.

In the absence of a existing instrument, a sense of competency scale (SCS) consisting of 23 items was designed by the researcher to measure the sense of intellectual and interpersonal competence of respondents. These items were developed after reviewing a number of inventories which measured self-esteem and other personal characteristics of college-aged students. Two instruments were particularly helpful in this task. The Personal Orientation Inventory (POI) developed by Evertt Shostrom (1963) and the Student Information Form developed by the ACE/UCLA Cooperative Institutional Research Program (1982) provided many of the ideas for the conceptualization of the sense of competency scale.

Each of the 23 on the SCS focused on the intellectual or interpersonal skills of the respondent. Thirteen of the 23 items were assigned to the interpersonal competence sub-

scale on a a priori basis. The remaining 10 items formed the intellectual competence subscale and were preassigned in the same manner. A 4-point Likert-type scale similar to the one developed for the URES was used to score these items. Since no statistical information was available for the SCS, a pilot study was conducted to determine the reliability of the instrument.

The Pilot Study

The 23-item SCS was distributed to 100 male and 100 female undergraduate residents at the institution studied. Ninety-seven (48.5%) subjects responded to the questionnaire. The total score for the SCS was 92 points. The mean score for respondents was 67.5 (SD = 6.24).

Reliability coefficients were determined using the Cronbach's Alpha model. The reliability coefficient for the 23-item SCS was .78. The reliability coefficients for the 13-item intellectual competence subscale and the 10-item interpersonal competence subscale were .76 and .79 respectively. The mean of the inter-item correlations was .14. The correlation between the two subscales was .11. These results were interpreted to mean that the scale was acceptably reliable and that each item tended to tap a unique component of a respondent's sense of competence as defined by Chickering (1969). The low correlation between the two sub-

scales indicated that they tended to measure different components of one's sense of competence.

A factor analysis also was carried out on the SCS. The initial statistics from the factor analysis are shown in Table 2. The Sense of Competence Scale (SCS) was listed as questions 81 through 103 in the questionnaire found in appendix A. The question numbers listed in Table 2 correspond to the question numbers on the questionnaire.

The first two factors accounted for 35.7% of the variance. Since the a priori content grouping which motivated the analysis focused on two factors (interpersonal competence and intellectual competence), the final solution focused on the structure and meaning of the first two factors. The factor pattern matrix for the varimax rotated factor solution is shown in Table 3.

The rotated factor matrix solution indicated that 20 items were "factorially pure." That is, these items were highly correlated with a single factor. Ten of these items loaded onto a major underlying construct which was labeled interpersonal competence (factor 1). An additional 10 items loaded onto a separate construct which was labeled intellectual competence (factor 2). Each of the 20 items corresponded to its original construct designation. The remaining three items were "complex" and did not load destinctively on either factor.

Table 2

Eigenvalues and Percent of Variance Explained From the Initial Factor Solution

Factor Extracted	Eigenvalue	Percent of Variance	Cummulative % of Variance
1	4.61929	20.1	20.1
2	3.59130	15.6	35.7
3	1.56243	6.8	42.5
4	1.45458	6.3	48.8
5	1.28251	5.6	54.4
6	1.20927	5.3	59.6
7	1.02220	4.4	64.1
8	1.00765	4.4	68.5
9	.89819	3.9	72.4
10	.80935	3.5	75.9
11	.68123	3.0	78.9
12	.64898	2.8	81.7
13	.58499	2.5	84.2
14	.55561	2.4	86.6
15	.51600	2.2	88.9
16	.47829	2.1	91.0
17	.44447	1.9	92.9
18	.37715	1.6	94.5
19	.33292	1.4	96.0
20	.28848	1.3	97.2
21	.26950	1.2	98.4
22	.19997	.9	99.3
23	.16565	.7	100.0

Table 3

Rotated Factor Pattern Matrix

Item		Factor 1 (Interpersonal)	Factor 2 (Intellectual)
81.	Meet people comfortably	.72853	.03838
82.	I read fast enough	-.14440	.51354
83.	Will have little difficulty	-.01882	.69589
84.	I feel empathy	.35964	-.14002
85.	I will need tutoring	-.08145	.69126
86.	I respond to others	.58041	-.08783
87.	I feel swamped with work	.04666	.49202
88.	I will graduate with honors	.07617	.72045
89.	I will fail at least 1 class	-.13086	.48498
90.	I make friends easily	.79825	-.00042
91.	I will achieve my academic goals	.26037	.49049
92.	I get along with most people	.75763	-.06130
93.	Professors underrate my ability	.06894	.25506
94.	I am afraid to make mistakes	.10675	.60280
95.	I trust my decisions	.49801	.44049
96.	I can cope with life	.45284	.34288
97.	I welcome criticism	.46586	.02574
98.	I'm not afraid to show emotions	.39041	-.15898
99.	I converse easily	.61819	.09981
100.	Friends know my weaknesses	.45867	-.09448
101.	I talk with professors easily	.28238	.39033
102.	Interpersonal ability	.54914	.10980
103.	Intellectual capacity	.11497	.78191

OTHER MEASURES

Academic Achievement

The grade point averages of respondents also were used as a measure of intellectual competence and formed the second dependent measure of the study. These averages were obtained from student records during the time the survey data was collected. Grade point averages were computed on a 4-point scale and based on the respondent's first two quarters of academic work.

DATA COLLECTION PROCEDURES

After specific floors in the residence hall system were selected, freshmen participants were identified from the most current housing rosters at the institution studied. Each participant received a letter inviting their participation that included a brief explanation of the research project (Appendix D). Participants received a second letter later that same week that reviewed the purpose of the research and provided a short set of instructions (Appendix E). A copy of the survey was attached to the second letter (Appendix A). Respondents were asked to complete the survey within a 48-hour period and return it to the residence life staff member on the floor. Notices of reminder were posted on

floor bulletin boards and residence life staff were asked to encourage participation. Questionnaires were not coded in any way for identification purposes. No additional contacts were made after the final reminder.

STATISTICAL ANALYSIS

Mean subscale scores on Form R and Form I of the URES were used to describe student-environment fit and illustrate the differences between the respondents' residence hall experience and what respondents defined as the ideal residence hall environment. Multiple regression was used to determine the relationship between student-environment fit and sense of competence. In this equation, perceived discrepancy scores (PDS) for each of the URES subscales were calculated and used as independent variables. The total score on the sense of competence scale (SCS) was used as the dependent measure. Actual discrepancy scores (ADS) also were calculated. These scores were used in a second regression equation to determine which fit score was the better measure of fit.

The relationship between student-environment fit and academic achievement was examined in a similar manner. Perceived discrepancy scores (PDS) for each of the 10 URES subscales were calculated and used as independent variables. The grade point averages of respondents were used as the de-

pendent measure in the equation. Actual discrepancy scores also were calculated for use in a second regression equation to determine which set of fit scores was the better measure.

CHAPTER 4

The findings of the study are reviewed in this chapter. A discussion of these results appears as responses to research questions one through three. A comparison of the actual and perceived discrepancy scores and the multiple regression analysis of student-environment fit scores and sense of competence appears in the response to research question 5. The comparison of actual and perceived discrepancy scores and the multiple regression analysis of student-environment scores and academic achievement appears as a response to question 6.

Rate of Response

A total of 456 (76.0%) questionnaires were returned from the sample of 600 freshmen. Of that number, 428 (71.3%) were complete and could be used for statistical analysis. The number of useable surveys represented 10.3% of the freshmen class.

In this sample of 428, 237 (55.4%) were male and 191 (44.6%) were female. The majority (52.8%) of the respondents lived in residence halls with capacities greater than 350. The remaining 47.2% lived in halls below that capacity. The response rate by floor varied from 56.7% to 96.6%.

Degree of Fit in the Relationship Dimension

The Relationship dimension of the URES consisted of two subscales: the involvement (Inv) subscale and the emotional support (S) subscale. The involvement subscale measured the degree of commitment to the hall and residents and; the amount of interaction and feeling of friendship among residents. The respondents' Form R mean score on the involvement subscale was 10.71 (SD = 2.20). The respondents' Form I mean score on the same subscale was 13.37 (SD = 1.89). The difference between the two means was 2.66 (SD = 2.55). These figures indicated that respondents' found less commitment to the floor and residents, less interaction, and less feelings of friendship than they defined as ideal.

The emotional support subscale measured the extent to which residents: (a) expressed concern for others on the floor, (b) made efforts to assist one another with personal and academic problems and, (c) expressed themselves openly and honestly. The respondents' Form R mean score on this subscale was 10.63 (SD = 2.06). The respondents' Form I mean subscale score was 13.21 (SD = 1.85). The difference between the two means was 2.57 (SD = 2.50). The means indicated that respondents found less concern for others, fewer efforts to aid one another, and less open and honest communications than they defined as ideal.

The involvement and emotional support subscales, which made up the Relationship dimension, were found to have the largest mean differences and the poorest degree of fit among all of the subscales. The differences in mean scores on each of the 10 subscales for both forms of the URES are shown in Table 4. A graphic representation of the difference between Form R and Form I means is illustrated in Figure 1. Since the reliability of difference scores is not as high as that of raw scores, the reliability coefficients for the real, ideal, and perceived discrepancy scores were computed for each subscale and are shown in Appendix C. While the reliabilities of the perceived discrepancy scores were lower than those calculated for the real and ideal subscale scores, they were found to be adequate for purposes of this study.

Degree of Fit in the Personal Growth and Development Dimension

The Personal Growth and Development dimension of the URES consisted of five subscales: (a) the independence (Ind) subscale, (b) the traditional social orientation (TSO) subscale, (c) the competition (C) subscale, (d) the academic achievement (AA) subscale and, e) the intellectuality (Int) subscale.

The independence subscale measured the diversity of residents' behaviors allowed without social sanctions. The

Table 4

Mean Scores for URES Subscales

Form R and Form I

Subscale		Form R	Form I	Diff.
Involvement (Inv)	$\bar{X}$	10.71	13.37	2.66
	SD	2.20	1.89	2.55
Emotional Support (S)	$\bar{X}$	10.63	13.21	2.57
	SD	2.06	1.85	2.50
Independence (Ind)	$\bar{X}$	10.34	8.94	-1.39
	SD	1.71	2.10	2.49
Traditional Social Orientation (TSO)	$\bar{X}$	11.09	10.54	-.55
	SD	2.08	1.78	2.15
Competition (C)	$\bar{X}$	9.73	7.94	-1.79
	SD	1.86	1.82	2.40
Academic Achievement (AA)	$\bar{X}$	10.82	12.99	2.17
	SD	2.27	2.01	2.50
Intellectuality (Int)	$\bar{X}$	9.45	11.35	1.90
	SD	1.88	1.84	2.23
Order and Organization (OO)	$\bar{X}$	10.04	12.57	2.53
	SD	2.03	1.85	2.67
Student Influence (SI)	$\bar{X}$	9.25	11.46	2.20
	SD	1.66	1.96	2.56
Innovation (Inn)	$\bar{X}$	10.48	12.34	1.86
	SD	1.80	1.72	2.17

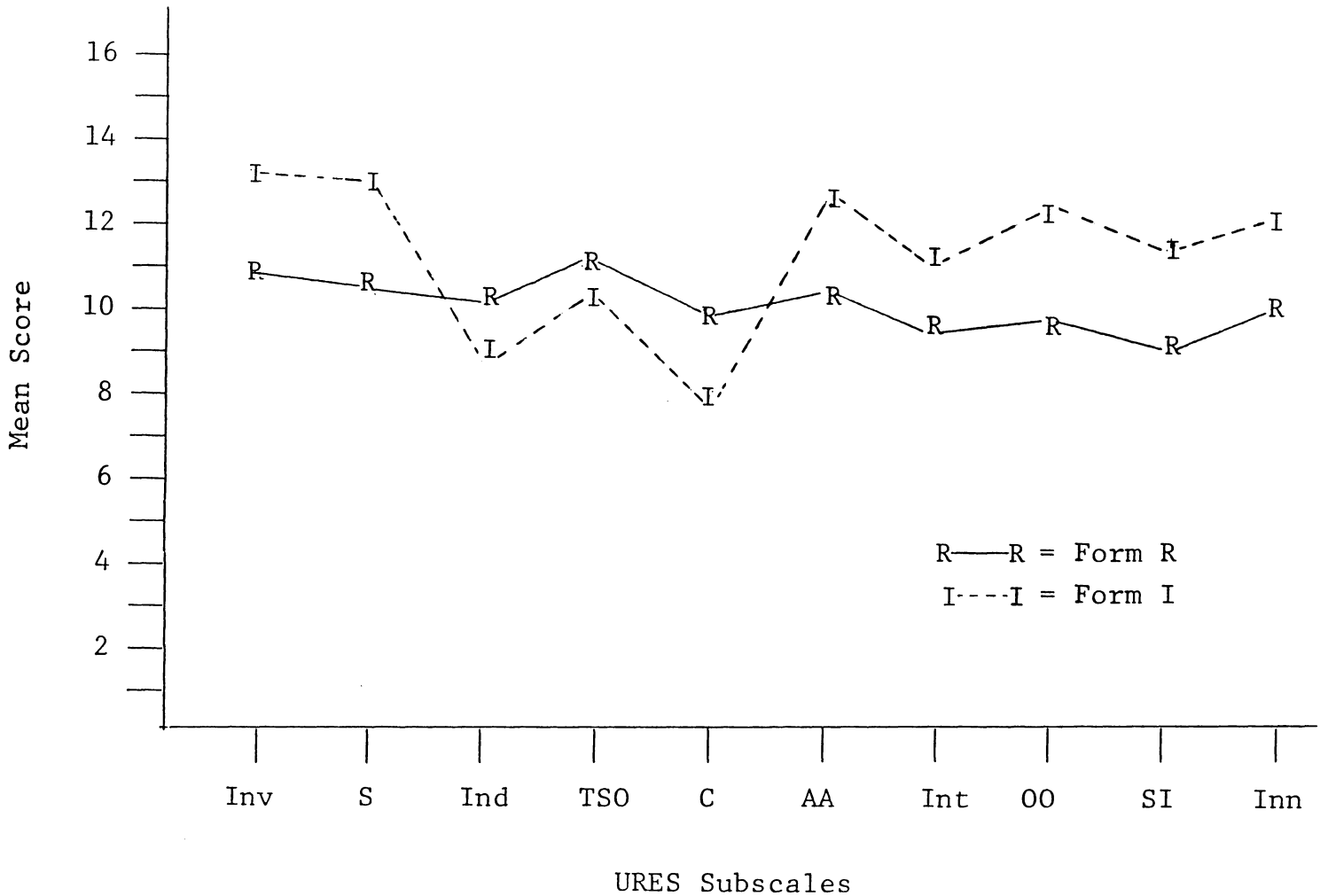

Figure 1. Comparisons of URES Form R and Form I Means

respondents' Form R mean subscale score was 10.34 (SD = 1.71). Their corresponding Form I subscale mean was 8.94 (SD = 2.10). The difference of these two means was -1.39 (SD = 2.49). These results indicated that respondents found that a greater diversity of behavior was allowed without social sanction than they defined as ideal. Respondents' mean scores indicated a desire for an environment where greater conformity would be found.

The traditional social orientation (TSO) subscale measured the degree to which dating, going to parties, and other "traditional" heterosexual interactions were stressed in the residence hall environment. The group's Form R mean score for the TSO subscale was 11.09 (SD = 2.08). The group's Form I mean score on the same subscale was 10.54 (SD = 1.78). The difference between the two means was -.55 (SD = 2.15). These scores indicated that respondents found only slightly more emphasis on these social activities than they would describe as being ideal. The relatively low mean difference indicated a close fit between what residents experienced in the residence hall environment and what they defined as being ideal.

The competition (C) subscale measured the degree to which a wide variety of activities such as dating and academic achievement were cast in a competitive framework. The group's Form R and Form I mean scores on this subscale were 9.73 (SD = 1.86) and 7.94 (SD = 1.82) respectively. The difference of the means was -1.79 (SD = 2.40). These results

indicated that respondents found a greater emphasis on competing and that this competitive framework was extended to a greater number of activities than they defined as being ideal. The group's Form I mean score of 7.94 was the lowest of all subscale scores.

The academic achievement (AA) subscale measured the degree to which academic accomplishments and concerns were prominent on the floor. The group's Form R and Form I mean scores for this subscale were 10.82 (SD = 2.27) and 12.99 (SD = 2.01) respectively. The difference of the means of 2.17 (SD = 2.50) indicated that classroom and academic accomplishments and concerns were less evident on the floor than respondents would define as ideal.

Finally, the intellectuality (Int) subscale measured the amount of emphasis on cultural, artistic, and other scholarly intellectual activities on the floor. The group reported less of an emphasis on these activities than ideal based on their Form R and Form I mean scores of 9.45 (SD = 1.88) and 11.35 (SD = 1.84), and a mean difference of 1.90 (SD = 2.23).

As an overall dimension, the mean differences of the five subscales illustrated a closer student-environment fit when compared to the other two major dimensions of the URES.

Degree of Fit in the System Maintenance and Change Dimension

The System Maintenance and Change dimension consisted of three subscales: (a) the order and organization (OO) subscale, (b) the student influence (SI) subscale and, (c) the innovation (Inn) subscale.

The order and organization subscale measured the amount of formal structure or organization existing on the floor for the purpose of facilitating student influence (i.e., the existence of established rules and procedures, schedules, etc.). The group's Form R mean score for this subscale was 10.04 (SD = 2.03). The corresponding Form I mean was 12.57 (SD = 1.85). A difference of 2.53 (SD = 2.67) was calculated when the Form R mean was subtracted from the Form I mean. These scores indicated that a lesser amount of formal structure was found on the floor than was desired. This lack of structure related specifically to the mechanisms relating to hall governance.

The student influence subscale measured the extent to which residents (not staff or administration) perceived that they controlled the running of the floor, formulated and enforced rules, controlled use of money, selected staff, and established policy. The respondents' Form R mean for the student influence (SI) subscale was 9.25 (SD = 1.66). The corresponding mean on Form I was 11.46 (SD = 1.96). The difference of the means was 2.20 (SD = 2.56) These scores

indicated that respondents felt less able to influence rules, the use of money, and the establishment of policy than ideal.

Finally, the innovation (Inn) subscale measured the extent to which new activities, behaviors, and ideas were presented on the floor. The group's Form R and Form I mean scores for this subscale were 10.48 (SD = 1.80) and 12.34 (SD = 1.72). The difference between the two subscale scores was 1.86 (SD = 2.17). The scores indicated that the group found fewer new ideas and activities presented on the floor than it defined as being ideal.

Discrepancy Scores and Sense of Competence

Multiple regression analysis was used to determine the relationship between respondents' discrepancy scores on the URES and their respective sense of competence scores. Both perceived discrepancy and actual discrepancy scores were computed and used as independent variables in two separate regression equations. These discrepancy scores represented measures of student-environment fit. Scores on the sense of competence scale were used as the dependent variable in the equations.

Perceived discrepancy scores were calculated for each respondent by subtracting an individual's Form R subscale score from his/her corresponding Form I subscale score. A perceived discrepancy score was obtained for each of the 10

URES subscales. Multiple regression analysis was performed using a forced entry mode for all 10 independent variables. The correlations, means, and standard deviations resulting from this analysis appear in Table 5.

Respondents' perceived discrepancy score on the involvement (Inv) subscale showed a .20 correlation with the dependent variable. The perceived discrepancy score on the innovation (Inn) subscale showed a .15 correlation. The correlation between the sense of competence scores and the perceived discrepancy score on the emotional support subscale was .13. These correlations were significant at the .01 level. The remaining independent variables correlated between -.07 and .08 with Sense of Competence.

Actual discrepancy scores were calculated by subtracting the mean Form R subscale score for all respondents in a living unit from the Form I subscale score of the individual living in that unit. Actual discrepancy scores were calculated for the 10 URES subscales and entered as independent variables. Scores on the sense of competence scale were used as the dependent variable. Multiple regression was used to determine the relationship between these variables. The forced entry mode was used and all 10 actual discrepancy scores were included in the regression equation.

The correlations between the sense of competence scores and respondents' actual discrepancy scores on the involvement (Inv), emotional support (S), independence (Ind), competition

Table 5

Correlations*, Means, and Standard Deviations for the Perceived Discrepancy and Sense of Competence Variables

	Sense	Inv	S	Ind	TSO	C	AA	Int	OO	SI	Inn	Mean	SD
Sense	1.00											62.54	5.57
Involvement (Inv)	.20	1.00										2.66	2.55
Emotional Support (S)	.13	.70	1.00									2.57	2.50
Independence (Ind)	-.04	-.26	-.23	1.00								-1.39	2.49
Traditional Social Orientation (TSO)	.01	-.01	-.09	-.12	1.00							- .55	2.15
Competition (C)	-.07	-.36	-.46	.09	.13	1.00						-1.79	2.40
Academic Achievement (AA)	.06	.34	.46	-.37	-.06	-.37	1.00					2.17	2.50
Intellectuality (Int)	.02	.42	.50	-.19	-.09	-.28	.50	1.00				1.90	2.23
Order and Organization (OO)	.08	.42	.44	-.24	-.11	-.37	.41	.39	1.00			2.53	2.67
Student Influence (SI)	.06	.15	.11	.14	-.03	-.24	.03	.05	.19	1.00		2.20	2.56
Innovation (Inn)	.15	.36	.34	.09	-.29	-.27	.07	.18	.23	.19	1.00	1.86	2.17

* r = .09 needed for .05 level of significance

r = .13 needed for .01 level of significance

(C), academic achievement (AA), intellecuality (Int), order and organization (OO), and the innovation (Inn) subscales were significant at the .01 level. Correlations ranged from -.22 to .37. The correlations, means, and standard deviations resulting from this analysis appear in Table 6.

The perceived discrepancy score model accounted for 5.34% of the total variance in sense of competence scores. The standardized regression coefficient for the involvement subscale (Inv) was .2091 and was the only coefficient significant at the .01 level. The actual discrepancy model, on the other hand, showed an R Square value of .1864 and accounted for 18.64% of the variance. The standardized regression coefficient for the innovation (Inn) subscale was .1968 ($p < .01$). The standardized regression coefficient of .1092 was significant for the competition (C) subscale at the .05 level. The standardized regression coefficient for the emotional support (S) subscale (.1670) was also significant at the .05 level. The summary statistics for these regressions appear in Table 7.

Since both models showed low R Square values, additional regression analyses were conducted using Real scores and Ideal scores. The Real score model showed an R Square value of .0840. The Ideal score model showed an R Square value of .1790. While both of these models accounted for greater percentages of variance in sense of competence scores than the perceived discrepancy score model, the actual dis-

Table 6

Correlations*, Means, and Standard Deviations for the Actual Discrepancy and Sense of Competence Variables

	Sense	Inv	S	Ind	TSO	C	AA	Int	OO	SI	Inn	Mean	SD
Sense	1.00											62.54	5.57
Involvement (Inv)	.35	1.00										2.65	1.93
Emotional Support (S)	.37	.78	1.00									2.57	1.82
Independence (Ind)	-.15	-.21	-.26	1.00								-1.39	2.12
Traditional Social Orientation (TSO)	.06	.03	.03	-.17	1.00							- .55	1.99
Competition (C)	-.22	-.41	-.47	.13	.17	1.00						-1.79	1.82
Academic Achievement (AA)	.14	.37	.49	-.33	.07	-.36	1.00					2.18	2.11
Intellectuality (Int)	.18	.34	.41	-.26	-.02	-.19	.44	1.00				1.90	1.85
Order and Organization (OO)	.26	.52	.53	-.41	-.04	-.39	.49	.39	1.00			2.53	1.90
Student Influence (SI)	.06	.24	.24	.18	-.04	-.23	.10	.03	.11	1.00		2.21	2.03
Innovation (Inn)	.32	.51	.49	.04	.11	-.16	.15	.21	.26	.32	1.00	1.86	1.79

* r = .09 needed for .05 level of significance

r = .13 needed for .01 level of significance

Table 7

Multiple Regression Analysis Summary for Sense of Competence

Independent Variables	Multiple R	R Square	F
Perceived Discrepancy Scores (PDS)	.2311	.0534	2.35
Actual Discrepancy Scores (ADS)	.4318	.1864	9.53

Standardized Regression Coefficients for URES Subscales

Scale	PDS	ADS
Involvement	.2091+	.0650
Emotional Support	-.0371	.1670*
Independence	-.0084	-.0596
Traditional Social Orientation	-.0041	.0542
Competition	.0105	-.1082*
Academic Achievement	.0406	-.0918
Intellectuality	-.0890	.0305
Order and Organization	-.0039	.0580
Student Influence	.0250	-.0681
Innovation	.1013	.1968+

* significant at the .05 level

+ significant at the .01 level

crepancy model was the strongest predictor. The complete statistics for the regression analyses on Real and Ideal scores appears in Appendix D.

Discrepancy Scores and Academic Achievement

Multiple regression analysis was used to determine the relationship between respondents' discrepancy scores on the URES and their respective grade point average. Perceived discrepancy and actual discrepancy scores were computed again and used as independent variables in two separate regression equations. Grade point averages calculated at the time the survey was conducted and were used as the dependent variables in the equations.

Perceived discrepancy scores were calculated for all 10 URES subscales in the manner previously described. Multiple regression analysis was performed using a forced entry mode for all 10 independent variables. The correlations between the independent variables and grade point average ranged from -.06 to .15. Correlations between grade point averages and scores on the involvement (Inv) and intellecuality (Int) subscales were significant at the .01 level. Correlations on the emotional support (S), order and organization (OO), and innovation (Inn) subscales were significant at the .05 level. The correlations, means, and standard deviations resulting from this analysis appear in Table 8.

Table 8

Correlations*, Mean, and Standard Deviations for the Perceived Discrepancy and Grade Point Average Variables

	QCA	Inv	S	Ind	TSO	C	AA	Int	OO	SI	Inn	Mean	SD
QCA	1.00											2.38	.63
Involvement (Inv)	.15	1.00										2.66	2.55
Emotional Support (S)	.12	.69	1.00									2.57	2.50
Independence (Ind)	-.05	-.26	-.23	1.00								-1.39	2.49
Traditional Social Orientation (TSO)	-.04	-.01	-.09	-.12	1.00							- .55	2.15
Competition (C)	-.06	-.36	-.46	.09	.13	1.00						-1.79	2.40
Academic Achievement (AA)	.04	.34	.46	-.37	-.05	-.37	1.00					2.17	2.50
Intellectuality (Int)	.14	.42	.50	-.19	-.08	-.28	.50	1.00				1.90	2.23
Order and Organization (OO)	.10	.43	.43	-.24	-.12	-.37	.41	.39	1.00			2.53	2.67
Student Influence (SI)	-.04	.15	.11	.14	-.03	-.24	.03	.05	.19	1.00		2.20	2.56
Innovation (Inn)	.09	.36	.34	.09	-.02	-.27	.08	.18	.24	.19	1.00	1.86	2.17

* r = .09 needed for .05 level of significance

r = .13 needed for .01 level of significance

Actual discrepancy scores were calculated by subtracting the mean Form R subscale score for all respondents in a living unit from the Form I subscale score of the individual living in that unit. Actual discrepancy scores were calculated for the 10 URES subscales and entered as independent variables. Grade point average was used as the dependent variable again. Multiple regression was used to determine the relationship between these variables. The enter selection mode was used and all 10 actual discrepancy scores were included in the regression equation.

Respondents' actual discrepancy scores on the involvement (Inv) subscale showed a .15 correlation with grade-point average and was significant at the .01 level. Correlations on the emotional support (S) and competition (C) subscales also were significant at this level. Correlations between grade point average and the traditional social orientation (TSO), the intellecuality (Int) and order and organization (OO) subscales were significant at the .05 level. The correlations, means, and standard deviations resulting from this analysis appear in Table 9.

The perceived discrepancy score model accounted for 4.45% of the total variance in grade point average. None of the standardized regression coefficients were significant. The actual discrepancy score model showed an R Square value of .0592 and accounted for 5.92% of the total variance. The standardized regression coefficient for the competition (C)

Table 9

Correlations*, Means, and Standard Deviations for thr Actual Discrepancy and Grade Point Variables

	QCA	Inv	S	Ind	TSO	C	AA	Int	OO	SI	Inn	Mean	SD
QCA	1.00											2.38	.63
Involvement (Inv)	.15	1.00										2.65	1.93
Emotional Support (S)	.13	.78	1.00									2.57	1.82
Independence (Ind)	-.08	-.21	-.26	1.00								-1.39	2.12
Traditional Social Orientation (TSO)	-.09	.03	.02	-.17	1.00							- .55	1.99
Competition (C)	-.14	-.41	-.47	.13	.17	1.00						-1.79	1.82
Academic Achievement (AA)	.03	.37	.49	-.33	.07	-.36	1.00					2.18	2.11
Intellectuality (Int)	.12	.34	.41	-.26	-.01	-.19	.44	1.00				1.90	1.85
Order and Organization (OO)	.11	.51	.53	-.40	-.04	-.39	.49	.39	1.00			2.53	1.90
Student Influence (SI)	-.04	.24	.24	.18	-.04	-.24	.10	.03	.10	1.00		2.21	2.03
Innovation (Inn)	.06	.51	.49	.04	.11	-.16	.15	.21	.26	.32	1.00	1.86	1.79

* r = .09 needed for .05 level of significance

r = .13 needed for .01 level of significance

subscale was .1163 and was significant at the .05 level. The complete summary of these statistics is found in Table 10.

Since both models showed low R Square values, additional regression analyses were conducted using Real scores and Ideal scores. The Real score model showed an R Square value of .0267. The Ideal score model showed an R Square value of .0701. While the Real score model accounted for a lesser percent of variance in grade point average than did the perceived discrepancy and actual discrepancy models, the ideal score model accounted for the greatest percent of variance in the dependent variable than any other model. The complete statistics for the regression analyses on Real and Ideal scores appears in Appendix E.

SUMMARY

The major research questions in this chapter addressed the examination of student-environment fit among freshmen and its relationship to sense of competence and academic achievement. A comparison of two different fit scores was also made. Of the 600 freshmen included in this sample, 428 (71.3%) returned useable questionnaires. The following observations were made:

1. The differences between the respondents' Form R and Form I mean scores were greatest in the Relationship dimen-

Table 10

Multiple Regression Analysis Summary for Grade Point Average

Independent Variables	Multiple R	R Square	F
Perceived Discrepacny Scores (PDS)	.2109	.0445	1.94
Actual Discrepancy Scores (ADS)	.2434	.0592	2.63

Standardized Regression Coefficients for URES Subscales

Scale	PDS	ADS
Involevement	.1193	.1130
Emotional Support	-.0319	-.0045
Independence	-.0133	-.0502
Traditional Social Orientation	-.0306	-.0886
Competition	-.0158	-.1163*
Academic Achievement	-.0791	-.0936
Intellectuality	.1175	-.0918
Order and Organization	.0492	-.0029
Student Influence	-.0918	.0866
Innovation	.0452	.0237

* significant at the .05 level

sion. The mean differences on the involvement and emotional support subscales were 2.66 and 2.57 respectively. These subscale means showed the greatest incongruence with regard to fit when the mean scores of the two forms were compared by subscale.

2. Negative differences between mean score on Form R and Form I were found on three subscales: (a) independence, (b) traditional social orientation and, (c) competition. Negative scores resulted when From R means scores were higher than Form I means scores. That is, respondents' experiences exceeded what was defined as ideal. All three subscales belonged to the Personal Growth and Development dimension. The differences between the respondents' Form R and Form I mean scores on these subscales were the smallest of all mean differences.

3. The System Maintenance and Change dimension was composed of three subscales: (a) order and organization, (b) student influence and, (c) innovation. The difference between the respondents' Form R and Form I mean scores were positive and ranged from 1.86 to 2.53. Respondents' definition of the ideal environment were not met based on their experience with that environment.

4. Perceived discrepancy and actual discrepancy scores were calculated and used as measures of student-environment fit. Multiple regression was used to determine the relationship of these scores to respondents' scores on the Sense of Competence scale. When actual discrepancy scores were used as the independent variables in the regression equation, 18.64% of the variance was explained. When perceived discrepancy scores were used, only 5.34% of the variance was explained.

5. These perceived discrepancy and actual discrepancy scores also were used to determine the relationship between fit and academic achievement. Grade point average was used as a measure of academic achievement. When actual discrepancy scores were used as independent variables in the regression equation, 5.92% of the variance was explained. When perceived discrepancy scores were used, 4.45% of the variance was explained.

CHAPTER 5

SUMMARY OF THE STUDY

The relationship between student-environment fit and sense of competence and academic achievement among freshmen was examined. The conceptual framework developed by Banning (1980) and others who defined the concept known as "campus ecology" was a central focus of this study. The work of Tracey and Sherry (1984) helped define two separate measures of student-environment fit using the University Residence Environment Scale (URES) developed by Moos and Gerst (1972). Sense of competence was operationally defined by Chickering (1969).

Data were collected and analyzed to determine the degree of student-environment fit among freshmen students living in residence halls at a large, land-grant university in the southeast. The relationship between student-environment fit and sense of competence and academic achievement also were examined. Fit scores derived from the URES were used as independent measures. Sense of competence, one's level of interpersonal and intellectual confidence, was measured by scores on the Sense of Competence Scale (SCS) developed by the researcher. Grade point averages served as the measure of academic achievement. These latter measures, sense of

competence and academic achievement, were used as dependent measures. Multiple regression was used to examine the relationship between these two sets of variables.

A stratified sample of 600 freshmen students were selected from a freshmen class of 4280 at the institution studied. The freshmen class was required to live in residence halls. Of the 600, 428 (71.3%) returned useable questionnaires.

FINDINGS AND DISCUSSION

The Relationship Dimension

The Relationship dimension of the URES was composed of the involvement (Inv) and emotional support (S) subscales. The differences between respondents' mean score on Form R and corresponding score on Form I on these subscales were 2.66 (SD = 2.55) and 2.57 (SD = 2.50) respectively. These were the largest mean differences recorded on any of the URES subscales represented the greatest degree of student-environment incongruence. These scores indicated that respondents found less commitment to the floor and fellow residents. Respondents experienced less interaction and less feeling of friendship with other residents than they defined as ideal. Further, respondents found less concern for others and fewer efforts to aid one another than expected.

These differences may have been only a reflection of the differences between the respondents' high school experience as seniors and their experience as college freshmen. Their involvement and support systems in the college environment may not have reached the same levels of development when compared to previous experiences.

Physical and architectural features of the residence halls also may have influenced this dynamic. All of the respondents lived in residence hall with capacities of 257 or more residents. The number of occupants per floor varied from 80 to 168. All of the respondents were housed in double rooms located on each side of long hallways. The average student-to-staff ratio was 52:1. It may have been that these architectural features inhibited the development of a more emotionally supportive environment. This finding supported the research done by Ford (1975) and Gerst and Sweetwood (1973). They found that "traditional residence halls" with rooms on both sides of the hallway were seen by residents as less involving and less supportive than similar residence halls with rooms configured in a suite-type arrangement.

The Personal Growth and Development Dimension

The Personal Growth and Development dimension of the URES was composed of five subscales: (a) independence (Int), (b) traditional social orientation (TSO), (c) competition

(C), (d) academic achievement (AA) and, (e) intellectuality (Int). The differences between respondents' mean score on Form R and corresponding score on Form I on these subscales were -1.39, -.55, -1.79, 2.17 and 1.90 respectively. The negative mean differences on the first three of these subscales meant that respondents' Form R scores were greater than their corresponding Form I scores. In these instances, respondents' experience or perception of the real environment exceeded what they defined as ideal.

Scores on the independence (Ind) subscale indicated that respondents found that a greater diversity of behavior was allowed without social sanction than ideal. The difference of the means ($X = -1.39$, $SD = 2.49$) indicated a greater desire for more conformity among residents. The student body at the institution studied was characterized by faculty and staff as a conservative one. The conservative nature of the institution and its students may have influenced the social mores of students in residence halls and increased the desire for a greater degree of conformist behavior.

The difference of the means for the traditional social orientation (TSO) subscale was the smallest of any mean difference ($X = -.55$, $SD = 2.15$). This score indicated that the degree to which dating, going to parties, and other "traditional" heterosexual activities were stressed as part of the college experience was similar to what respondents defined as ideal. The residence hall system studied offered frequent

recreational and social programs for its residents. It may have been that these programs, along with other opportunities provided by the university and surrounding community, satisfactorily met the needs of respondents. It also may have been that respondents came to college with the necessary interpersonal skills to cope with the challenges provided by these activities. Thus, little incongruence was reported.

Respondents' mean scores on Form R and Form I resulted in a mean difference of -1.79 (SD = 2.40) on the competition (C) subscale. This negative difference indicated that the respondents' found a greater emphasis on competing and that this competitive framework was extended to a greater number of activities than they defined to be ideal. While the freshmen class selected by the institution studied represented an extremely able group, the degree of competition found in the residence hall environment was not viewed positively. This finding was not surprising given the group's desire for greater emotional support already identified in the Relationship dimension.

The academic achievement (AA) and intellectuality (Int) subscales measured the degree to which academic accomplishments and concerns, and the amount of emphasis on cultural, artistic, and scholarly intellectual activities were prominent on the floor. The differences of the means on these two subscales were 2.17 (SD = 2.50) and 1.90 (SD = 2.23) respec-

tively. These scores indicated that greater numbers of academic/intellectual activities were desired.

The freshmen class selected at the institution studied were an academically talented group with average SAT scores of 1100. Little educational programming occurred in the residence hall system studied. This lack of programming, given the academic orientation of those found in residence halls, could have accounted for some of this incongruence. Study space, outside the resident's room also was limited. This, too, may have hampered academic activity.

The System Maintenance and Change Dimension

The System Maintenance and Change dimension consisted of three subscales: (a) the order and organization (OO) subscale, (b) the student influence (SI) subscale and , (c) the innovation (Inn) subscale. The difference of the means on the order and organization subscale (X = 2.53, SD = 2.67) indicated that a lesser amount of formal structure on the floor was found than was desired. This finding referred to the mechanisms relating to hall governance. Hall council officers were not as visible nor were their roles as well-defined as respondents' would have desired. This score also indicated that respondents expected hall council officers to be more organized. This finding was expected since the Residence Hall Federation, the hall council group in residence

halls, drew from the freshmen and sophomore classes for its elected positions. It may have been that these students were not able to implement the types of programs residents felt important.

Scores on the student influence (SI) subscale indicated that respondents felt less able to control outcomes. They felt less able to influence rules, the use of money, and the establishment of policy than ideal. The difference of the means on Form R and Form I on this subscale was 2.20 (SD = 2.56). While the Residence Hall Federation was seen as an effective governance group at the campus-wide level, policy issues were not usually discussed in great detail at the floor level. Hall councils had little manpower and few financial resources. These factors may have accounted for some of the incongruence in this subscale.

Finally, the innovation (Inn) subscale measured the extent that new ideas, activities, and behaviors were present on the floor. The difference of the means (X = 1.86, SD = 2.17) indicated that the respondents' found fewer new activities and ideas presented on the floor than ideal. This finding seems to contradict the group's desire for greater conformity.

Fit Scores and Sense of Competence

The 10 perceived discrepancy scores (PDS) accounted for 5.34% of the total variance in the sense of competence scores of freshmen when they were used as independent variables in a multiple regression equation. The standardized regression coefficient for the involvement (Inv) subscale was significant at the .01 level.

Actual discrepancy scores were calculated and used as independent variables a second regression analysis. They accounted for 18.64% of the total variance in sense of competence scores. The standardized regression coefficient for the innovation (Inn) subscale was significant at the .01 level. The standardized regression coefficient for the emotional support (S) and the competition (C) subscales were significant at the .05 level.

Actual discrepancy scores were calculated using mean rating of participants on each floor. This measure was found to be superior to the perceived discrepancy score in predicting sense of competence and may be considered more valid than the perceived discrepancy scores. These results tend to support the view Tracey and Sherry (1984) and Pascasrella and Terenzini (1982) who content that this consensus rating is a more valid reflection of the actual environment and is less subject to individual variation.

Fit Scores and Academic Achievement

The 10 perceived discrepancy scores (PDS) accounted for 4.45% of the total variance in the grade point averages of freshmen when they were used as independent variables in a multiple regression analysis. Actual discrepancy scores were calculated and accounted for 5.92% of the total variance in grade point averages when used in a second regression equation. The standardized regression coefficient for the competition (C) subscale was significant at the .05 level.

The relationship between student-environment fit scores and grade point average was expected to be very weak. Research on academic achievement has shown that variables such as high school grades and class rank in high school are more likely to be related to academic achievement in college. It was not likely that the effect of student-environment fit in a residence hall environment on grade point average would be great.

Actual discrepancy scores in this regression analysis continued to account for more variance in the dependent variable than did the perceived discrepancy scores.

RECOMMENDATIONS FOR PRACTICAL APPLICATION

Freshmen should be housed in smaller facilities with high staff-student ratios. It may be that these factors

would increase students' sense of belonging and emotional support.

The introduction of a peer academic assistance program for freshmen may attend to respondents' desire for an increased emphasis on academics and also may increase the feeling of emotional support experienced on the floor. Increasing the availability of study space and in-hall tutors also may help focus attention on academics. Reducing the dichotomy between classroom/academic activity and residence hall/social activity may reduce some of the incongruence found in the Personal Growth and Development dimension.

The Residence Hall Federation (RHF) should redesign its hall council structure so as to involve a greater number of students. Responsibilities of its officers should be more clearly defined. The viability and visibility of the Residence Hall Federation should be increased. The development of a "town meeting" style governance system or other high involvement approaches also should be investigated. Increasing the opportunities to influence outcomes and the decision making process may improve the student-environment fit in the System Maintenance and Change dimension.

RECOMMENDATIONS FOR FURTHER RESEARCH

The Sense of Competence Scale (SCS) developed for this study should be tested further. While its reliability proved

adequate, other researchers should examine its validity. Upperclass students were not included in this study. The differences in sense of competence among various classes should be the subject of further inquiry.

Differences in gender and the affects of types of residence hall facilities as they relate to student-environment fit were not examined in this study. The affect of these factors on student-environment fit should be studied in more detail.

Finally, other dynamics should be examined to determine their affect on student-environment fit. Does living with a requested roommate versus an assigned roommate or one's level of satisfaction with residence hall living effect student-environment fit? Selected socio-economic factors should also be examined. Does one's family experience with college or economic status effect a college student's perception of fit with a particular environment? Answers to these questions may help researchers explain what dynamics are most important in determining student-environment fit.

REFERENCES

Astin, A. W. (1963). Further validation of the environmental technique. Journal of Educational Psychology, 54, 217-226.

Astin, A. W. (1968). The college environment. Washington, DC: American Council on Education.

Astin, A. W. (1973). The impact of dormitory living on students. Educational Record, 54, 204-210.

Astin, A. W. (1977). Four critical years: Effects of college on beliefs, attitudes, and knowledge. San Francisco, CA: Jossey-Bass.

Astin, A. W., & Holland, J. L. (1961). The environmental assessment technique: A way to measure college environments. Journal of Educational Psychology, 52, 308-316.

Astin, A. H., & Panos, R. (1969). The educational and vocational development of college students. Washington, DC: American Council on Education.

Aulepp, L., & Delworth, U. (1976). Training manual for an ecosystem model. Boulder, CO: Western Interstate Commission for Higher Education.

Banning, J. H. (Ed.). (1978). Campus ecology: A perspective for student affairs. Cincinnati, OH: Monographs of the National Association of Student Personnel Administrators, (No. 1).

Banning, J. H. (1980). Management of the campus ecology. In U. Delworth & G. Hanson (Eds.), Student services: A handbook for the profession, (pp. 209-227). San Francisco, CA: Jossey-Bass.

Banning, J. H. (1985). Changing the environment. Proceedings from 3rd Annual Conference on Campus Ecology. Bolder, CO.

Banning, J. H., & Kaiser, L. (1974). An ecological perspective and model for campus design. Personnel and Guidance Journal, 52, 370-375.

Banning, J. H., & McKinley, D. L. (1980). Conceptions of the campus environment. In W. H. Morrill, J. C. Hurst, & E. R. Oetting (Eds.), Dimensions of intervention for student development (pp. 39-57). New York, NY: Wiley.

Barker, R. G. (1968). Ecological psychology: Concepts and methods for studying the environment of human behavior. Stanford, CA: Stanford University Press.

Baron, R. M., Mandel, D. R., Adams, C. A., & Griffin, L. M. (1976). Effects of social density in university residential environments. Journal of Personality and Social Psychology, 34, 434-446.

Baum, A., & Valins, S. (1977). Architecture and social behavior. Hillsdale, NJ: Lawerence Erlbaum Associates.

Beal, P. & Williams, D. (1968). An experiment with mixed class housing assisgnments at the University of Oregon. Research and Information report on student housing research. Association of College and University Housing Officers.

Bickman, L., Teger, A., Gabrieie, T., McLaughlin, C., Berger, M., & Sunaday, E. (1973). Dormitory density and helping behavior. Environment and Behavior, 5, 465-490.

Blocher, D. H. (1978). Campus learning environments and the ecology of student development. In J. H. Banning (Ed.), Campus ecology: A perspective for student affairs, (pp. 17-23). Cincinnati, OH: National Association of Student Personnel Administrators.

Bowen, H. R. (1977). Investment in learning: The individual and social value of American higher education. San Francisco, CA: Jossey-Bass.

Brown, R. D., Winkworth, J., & Braskamp, L. (1973). Student development in a coed residence hall: prophylatic, or panacea? Journal of College Student Personnel, 12, 98-104.

Brubacher, J. S. & Rudy, W. (1976). Higher education in transition. New York, NY: Harper & Row.

Bruch, M. A. (1977). Psychological screening inventory as a predictor of college student adjustment. Journal of Consulting and Clinical Psychology, 45, 237-244.

Buros, O. K. (1978). The eigth mental measurements yearbook. Highland Park, NJ: Gryphon Press.

Chickering, A. W. (1969). Education and identity. San Francisco, CA: Jossey-Bass.

Clark, B. R., & Trow, M. (1966). The organizational context. In T. M. Newcomb & E. K. Wilson (Eds.), College peer groups: Problems and prospects for research (pp. 17-20). Chicago: Aldine.

Comery, A., & Montag, I. (1982). Comparison of factor analytic results with two-choice and seven-item personality item formats. Applied Psychological Measurement, 6, 285-289.

Daher, D. M., Corazzini, J. G., & McKinnon, R. C. (1977). An environmental redesign program for residence halls. Journal of College Student Personnel, 18, 11-15.

Daniels, L., & Berkowitz, L. (1963). Liking and response to dependency relationships. Human Relations, 16, 141-148.

Desler, M. & North, G. (1978). The impact of overassignment on grade point average of first-time freshmen. Journal of College and University Student Housing, 8, 18-22.

DeCoster, D. A. (1966). Housing assignments for high ability students. Journal of College Personnel, 7, 19-22.

DeCoster, D. A. (1968). Effects of homogeneous housing assignments for high ability students. Journal of College Student Personnel , 9, 75-78.

Delworth, U., & Hanson, G. R. (Eds.). (1980). Student services: A handbook for the profession. San Francisco, CA: Jossey-Bass.

Duncan, C. M., & Stoner, K. L. (1977). The academic achievement of residents living in a scholar residence hall. Journal of College and University Student Housing, 6, 7-10.

Ekehammar, B. (1974). Interactionism in personality from a historical perspective. Psychological Bulletin, 81 , 1026-1048.

Feldman, K. A., & Newcomb, T. M. (1969). The impact of college on students. San Francisco: Jossey-Bass.

Feldman, R. E. (1968). Response to compatriot and foreigner who seek assistance. Journal of Personality and Social Psychology , 10, 202-214.

Ford, M. (1975). The social ecology of University of Northern Colorado residence halls. Unpublished doctoral dissertation, University of Northern Colorado.

Freedman, L. L., Levy, A., Buchanan, R. W., & Price, J. (1972). Crowding and human aggressiveness. Journal of Experimental Social Psychology, 8, 528-548.

Frichette, S. (1976). Factors associated with the social climate of single-sex and coeducational residence halls, cooperatives, fraternities, and sororities on the Oregon State University campus. Unpublished doctoral dissertation, Oregon State University.

Gerst, M., & Moos, R. H. (1972). The social ecology of university student residences. Journal of Educational Psychology, 63, 513-525.

Gerst, M. & Sweetwood, H. (1973). Correlates of dormitory social climates. Journal of Educational Psychology, 63, 513-525.

Goebel, J. (1976). Alienation in dormitory life. Unpublished doctoral dissertation, Texas Christian University.

Goldman, B. A. (1966). Effects of emergency housing policy on grade point averages. Journal of College Student Personnel, 7 , 266-270.

Hallenbeck, D. A., & Balswick, J. K. (1978). The effects of over-occupancy on residence hall satisfaction and grade point average. Journal of College and University Student Housing, 7 , 19-23.

Herbert, D. J. (1966). The relationship between the percentage of freshmen on a corridor and the GPA of the occupants. College and University, 41, 348-352.

Holland, J. L. (1966). The psychology of vocational choice. Boston, MA: Blaisdell.

Holland, J. L. (1973). Making vocational choices: A theory of careers. Englewood Cliffs, NJ: Prentice-Hall.

Hountras, P. T., & Brandt, K. R. (1970). Relation of student residence to academic performance in college. Journal of Educational Research, 63, 8, 351-354.

Huebner, L. A. (Ed.). (1979). Applying the ecosystem perspective San Francisco, CA: Jossey-Bass.

Huebner, L. A. (1980). Interaction of student and campus. In U. Delworth & G. R. Hanson (Eds.), Student services: A handbook for the profession, (pp.117-143). San Francisco, CA: Jossey-Bass.

Huebner, L. A., & Corazzini, J. G. (1976). Ecomapping: A dynamic model for intentional campus design. Student Development Staff Papers. Fort Collins, CO: Colorado State University.

Kaludis, G., & Zatkin, G. (1966). Anatomy of a pledge class. Journal of College Student Personnel, 7, 282-284.

Kantor, J. R. (1924) Principles of psychology, Vol. 1. Bloomington, IN: Principia Press.

Kaplan, B., Cassel, J., & Gore, S. (1977). Social support and health. Medical Care, 15, 47-58.

Kiritz, S., & Moos, R. H. (1974). Physiological effects of social environments. Psychosomatic Medicine, 36, 96-114.

Lewin, K. (1936). Principles of topological psychology. New York, NY: McGraw-Hill.

Madson, D. L., Kuder, J. K., Hartanov, T. F., & McKelfresh, D. A. (1976). Residential academic groupings - a program evaluation. Journal of College and University Student Housing, 6 , 16-20.

Magnarella, P. J. (1975). The University of Vermont's living learning center: A first-year appraisal. Journal of College Student Personnel, 16, 300-316.

Maurais, R. L. (1968). A statistical analysis of the effects of housing environment on grade point average. Research in Education. (ERIC Document Reproduction Service No. ED 027 874)

McLaughlin, G. W., Stull, W., & Montgomery, J. R. (1973). Temporary residence hall assignments: The impact on the original room occupants. Journal of College and University Student Housing, 3, 11-14.

McReynolds, P. (1979). The case for interactional assessment. Behavioral Assessment, 1, 237-247.

Midlarsky, E. (1968). Aiding responses: An analysis and review. Merrill Palmer Questionnaire, 14, 224-260.

Miller, T. K., & Prince, J. S. (1976). The future of student affairs. San Francisco, CA: Jossey-Bass.

Moos, R. H. (1974). Evaluating treatment environments: A social ecological approach. San Francisco, CA: Jossey-Bass.

Moos, R. H., & Gerst, M. S. (1974). University residence environment scale manual. Palo Alto, CA.: Consulting Psychologists Press.

Moos, R. H. (1976). The human context: Environmental determinants of behavior. New York, NY.: Wiley & Sons.

Moos, R. H. (1978). Social environments of university student living groups - architectural and organizational correlates. Environment and Behavior, 10, 109-126.

Moos, R. H. (1979). Evaluating educational environments. San Francisco CA.: Jossey-Bass.

Moos, R. H. (1979). Social-ecological perspectives on health. In G. Stone, F. Cohen, & N. Adler (Eds.), Health psychology: Theories, applications, and challenges of a psychological approach to the health care system, (pp 109-126). San Francisco, CA: Jossey-Bass.

Moos, R. H., & Gerst, M. S. (1972). Social ecology of university student residences. Journal of Educational Psychology, 63, 513-525.

Moos, R. H., & Otto, J. (1975). The impact of coed living on males and females. Journal of College Student Personnel, 16, 459-467.

Moos, R. H., & Van Dort, B. (1977). Physical and emotional symptoms and campus health center utilization. Social Psychiatry, 12, 107-115.

Morishima, J. K. (1966). Effects of student achievement in residence hall groupings based on academic majors. In Research on academic input: Proceedings of the sixth annual forum of the association for institutional research, (pp. 56-69). C. H. Bagley (Ed.), Cortland, NY: Office of Institutional Planning, State University of New York College at Cortland.

Morrill, W. H., Hurst, J. C., & Oetting, E. R. (1974). Dimensions of counselor functioning. Personnel and Guidance Journal, 52, 354-359.

Murray, H. A. (1938). Explorations in personality. New York, NY: Oxford University Press.

Null, R. L. (1981). Student perceptions of the social and academic climates of suite living arrangements. Journal of College and University Student Housing, 11, 6-12.

Parker, C. A. (Ed.). (1978). Thirty-six faces of counseling. Personnel and Guidance Journal, 52, 354-357.

Parsons, J. T. (1982). Academic achievement of freshmen temporarily assigned to triple rooms. Journal of College and University Student Housing, 12, 34.

Paul, S. C. (1980). Understanding the student-environment interaction. In W. H. Morrill, J. C. Hurst, & E. R. Oetting (Eds.), Dimensions of intervention for student development (pp. 58-82). New York, NY: Wiley.

Pervin, L. A. (1968). Performance and satisfaction as a function of individual-environment fit. Psychological Bulletin, 69, 56-58.

Pascarella, E. T., & Terenzini, P. T. (1982). Contextual analysis as a method for assessing residence group effects. Journal of College Student Personnel, 23, 108-114.

Phillips, B. A., & Schuh, J. H. (1979). Residence life. In G. D. Kuh (Ed.), Evaluation in student affairs (pp. 77-86). Cincinnati, OH: ACPA Media.

Prusok, R. E. & Walsh, W. B. (1964). College student residence and academic achievement. Journal of College Student Personnel, 5, 180-184.

Reid, E. A. (1974). Effects of coresidential living on the attitude, self-image, and role expectations of college women. American Journal of Psychiatry, 131, 551-554.

Riker, H. C. (1976). Trends. Journal of College and University Student Housing, 7, 5-7.

Ross, M., Layton, B., Erickson, B., & Schopler, J. (1973). Affect, facial regard, and reactions to crowding. Journal of Personality and Social Psychology, 28, 68-76.

Sanford, N. (1966). The American college. New York, NY: Wiley.

Schroeder, C. C., & LeMay, M. L. (1973). The impact of coed residence halls on self-actualization. Journal of College Student Personnel, 14, 105-110.

Schroeder, W. L., & Sledge, G. W. (1966). Factors related to collegiate academic success. Journal of College Student Personnel, 7, 97-104.

Severinsen, K., Vivano, A., & Hopkins, G. (1970). Effect of overassignment to residence hall rooms. Journal of College Student Personnel, 11, 141-143.

Shostrom, E. L. (1963). Personal orientation inventory. San Diego, CA: Educational and Industrial Testing Service.

Shute, C. (1973). Aristotle's interactionism and its transformations by some 20th century writers. Psychological Record, 23, 283-293.

Skinner, B. F. (1953). Science and human behavior. New York, NY: MacMillan.

Smail, M. M., DeYoung, A. J., Moos, R. H. (1974). The University Residence Environment Scale: A method of describing university student living groups. Journal of College Personnel, 15 , 357-366.

Snead, R. G., & Caple, R. B. (1971). Some effects of the environmental press in university housing. Journal of College Student Personnel, 12, 189-192.

Spencer, E. F. (1979). The impact of physical and psychological crowding on students in residence halls. Journal of College and University Student Housing, 9, 11-17.

Stern, G. G. (1970). People in context. New York: Wiley.

Stokols, D., Rall, M., Pinner, B., & Scopler, J. (1973). Physical, social, and personal determinants of the perception of crowding. Environment and Behavior, 5, 87-115.

Stoner, K. L. & Thurman, C. W. (1978). The effects of density in a high-rise residence hall on helping behavior. Journal of College and University Student Housing, 7, 14-18.

Tracey, T. J., & Sherry, P. (1984). College student distress as a function of person-environment fit. Journal of College Student Personnel, 29, 3, 436-442.

Walsh, W. B. (1973). Theories of person-environment interaction: Implications for the college student. Iowa City, IA: American College Testing Program.

Walsh, W. B. (1978). Person/environment interaction. In J. H. Banning (Ed.), Campus Ecology: A perspective for student affairs, (pp. 6-16). Cincinnati, OH: National Association of Student Personnel Administrators.

Watson, J. B. (1958). Behaviorism. Chicago, IL: University of Chicago Press.

Whittington, T. B. (1974). An evaluation of a renovated residence hall. Journal of College and University Student Housing, 4, 19-22.

Willingham, W. W. (1962). College performance of fraternity members and independent students. Personnel and Guidance Journal , 41, 29-31.

Winkler, K. J. (1985, July, 10). Campus ecologists seek to adapt colleges' environments to students. The Chronicle of Higher Education, p. 11.

Yager, G. & Gabriel, R. (1972). Normal occupancy versus over-occupancy in residence hall accommodations. MSU Orient, 7, 18-28.

APPENDIX A. SOCIAL CLIMATE SURVEY

SOCIAL CLIMATE SURVEY

There are 103 statements in this survey about living in residence halls. Please circle the degree to which you agree with each item. The term "staff" refers to Resident Advisors and Head Residents living on your floor. Please fill in your place of residence, social security number and class status in the space provided. YOUR RESPONSES ARE CONFIDENTIAL.

Room	Hall	- -	FR SO JR SR
		Social Security Number	Class Status

PART I Please respond to these items as they define your present floor.

SA= Strongly Agree A= Agree D= Disagree SD= Strongly Disagree

1.	There is a feeling of unity and cohesion here.	SA A D SD
2.	People are concerned with helping and supporting one another.	SA A D SD
3.	People here tend to check on whether their behavior is acceptable to others on the hall.	SA A D SD
4.	Dating is a recurring topic around here.	SA A D SD
5.	Around here discussions frequently turn into verbal duals.	SA A D SD
6.	People around here hardly ever seem to be studying.	SA A D SD
7.	People around here talk a lot about political and and social issues.	SA A D SD
8.	The RHF Hall officers function in a somewhat haphazard manner.	SA A D SD
9.	The staff here decide whether and when residents can have visitors of the opposite sex in their rooms.	SA A D SD
10.	New approaches to things are often tried here.	SA A D SD
11.	Very few things around here arouse much interest or excitement.	SA A D SD
12.	Around here people tend to hide their feelings from one another.	SA A D SD
13.	People around here act and think freely without too much regard for social opinion.	SA A D SD
14.	Some people around here spend a lot of time preparing for dates.	SA A D SD
15.	People don't try to impress each other here.	SA A D SD

16. Around here studies are secondary to most activities. SA A D SD

17. There is a good deal of concern about intellectual awareness on this hall. SA A D SD

18. The jobs of RHF hall council officers are not clearly defined. SA A D SD

19. The students formulate most of the rules here. SA A D SD

20. Innovation is not considered important here. SA A D SD

21. There is a strong sense of belongingness here. SA A D SD

22. Trying to understand the feelings of others is considered important by most people around here. SA A D SD

23. Around here most people are not interested in up-holding most social conventions. SA A D SD

24. People around here consider other types of social activities to be more important than dating. SA A D SD

25. People tend not to compete with each other on this floor. SA A D SD

26. People here work hard to get top grades. SA A D SD

27. People here very rarely discuss intellectual matters. SA A D SD

28. Hall procedures here are well established. SA A D SD

29. The staff here have the last say about discipline. SA A D SD

30. People often do unusual things on this floor. SA A D SD

31. Most people here have a strong sense of loyalty toward the floor. SA A D SD

32. People here try to make others feel secure. SA A D SD

33. Behaving correctly in public is pretty unimportant on this floor. SA A D SD

34. On this floor, dating is not important. SA A D SD

35. People around here are always trying to win an argument. SA A D SD

36. Most people here consider studies as very important in college. SA A D SD

37. There is not much appreciation here for classical music, art, literature, etc. SA A D SD

38. Hall activities are pretty carefully planned here. SA A D SD

39. Hall finances are handled exclusively by students here. SA A D SD

40. Doing things in a different way is valued here. SA A D SD

PART II Please respond to these items as they define the IDEAL floor. "The ideal floor would be one where...."

41. There is a feeling of unity and cohesion. SA A D SD

42. People are concerned with helping and supporting one another. SA A D SD

43. People tend to check on whether their behavior is acceptable to others on the hall. SA A D SD

44. Dating is a recurring topic. SA A D SD

45. Discussions frequently turn into verbal duals. SA A D SD

46. People hardly ever seem to be studying. SA A D SD

47. People talk a lot about political and social issues. SA A D SD

48. RHF Hall officers function in a somewhat haphazard manner. SA A D SD

49. The staff decide whether and when residents can have visitors of the opposite sex in their rooms. SA A D SD

50. New approaches to things are often tried. SA A D SD

51. Very few things arouse much interest or excitement. SA A D SD

52. People tend to hide their feelings from one another SA A D SD

53. People act and think freely without too much regard for social opinion. SA A D SD

54. Some people spend a lot of time preparing for dates. SA A D SD

55. People don't try to impress each other. SA A D SD

56. Studies are secondary to most activities. SA A D SD

57. There is a good deal of concern about intellectual awareness on the hall. SA A D SD

58. The jobs of RHF hall council officers are not clearly defined. SA A D SD

59. The students formulate most of the rules. SA A D SD

60. Innovation is not considered important. SA A D SD

61. There is a strong sense of belongingness. SA A D SD

62. Trying to understand the feelings of others is considered important by most people. SA A D SD

63. Most people are not interested in up-holding most social conventions. SA A D SD

64. People consider other types of social activities to be more important than dating. SA A D SD

65. People tend not to compete with each other. SA A D SD

66. People here work hard to get top grades. SA A D SD

67. People very rarely discuss intellectual matters. SA A D SD

68. Hall procedures are well established. SA A D SD

69. The staff have the last say about discipline. SA A D SD

70. People often do unusual things. SA A D SD

71. Most people have a strong sense of loyalty toward the floor. SA A D SD

72. People try to make others feel secure. SA A D SD

73. Behaving correctly in public is pretty unimportant. SA A D SD

74. Dating is not important. SA A D SD

75. People are always trying to win as argument. SA A D SD

76. Most people consider studies as very important in college. SA A D SD

77. There is not much appreciation for classical music, art, literature, etc. SA A D SD

78. Hall activities are pretty carefully planned. SA A D SD

79. Hall finances are handled exclusively by students SA A D SD

80. Doing things in a different way is valued here. SA A D SD

Part III The following questions are designed to assess your sense of interpersonal and intellectual competence. Interpersonal competence refers to your capacity to relate or to interact with others. Intellectual competence refers to your ability for knowing yourself and accomplishing tasks which require mental ability.

Please circle the response which represents your feelings about each statement as it applies to you using the same scale as before.

81. I meet people comfortably. SA A D SD

82. I read fast enough to handle assignments at college. SA A D SD

83. I have little difficulty with college work. SA A D SD

84. I feel empathy for others. SA A D SD

85. I will need tutoring in a specific course. SA A D SD

86. I respond to the needs of others. SA A D SD

87. I feel swamped with academic work. SA A D SD

88. I will graduate with honors. SA A D SD

89. I will fail at least one college course? SA A D SD

90. I make friends easily. SA A D SD

91. I will achieve my academic goals. SA A D SD

92. I get along with most of the people I meet. SA A D SD

93. Professors underrate my ability. SA A D SD

94. I am afraid of making mistakes. SA A D SD

95. I trust the decisions I make. SA A D SD

96. I can cope with life's ups and downs. SA A D SD

97. I welcome criticism as an opportunity for growth. SA A D SD

98. I am not afraid to show my emotions. SA A D SD

99. I converse casually and seriously with friends. SA A D SD

100. I don't mind if friends know my weaknesses. SA A D SD

101. I talk with professors easily about my concerns. SA A D SD

102. Rate your interpersonal skill level (1 = low; 4 = high). 1 2 3 4

103. Rate your intellectual capacity (1 = low; 4 = high). 1 2 3 4

PLEASE RETURN THIS FORM TO YOUR RA SOON AS POSSIBLE ! THANKS.

APPENDIX B. URES SUBSCALE ITEMS

URES SUBSCALE ITEMS - FORM R

Respondents were asked to respond to these items as they defined their present floor environment.

Involvement (Inv)

1. There is a feeling of unity and cohesion here.
11. Very few things around here arouse much interest or excitement.
21. There is a strong sense of belongingness here.
31. Most people here have a strong sense of loyalty toward the floor.

Emotional Support (S)

2. People are concerned with helping and supporting one another.
12. Around here people tend to hide their feelings from one another.
22. Trying to understand the feelings of others is considered important by most people around here.
32. People here try to make others feel secure.

Independence (Ind)

3. People here tend to check on whether their behavior is acceptable to others on the hall.
13. People around here act and think freely without too much regard for social opinion.
23. Around here most people are not interested in up-holding most social conventions.
33. Behaving correctly in public is pretty unimportant on this floor.

Traditional Social Orientation (TSO)

4. Dating is a recurring topic around here.
14. Some people around here spend a lot of time preparing for dates.
24. People around here consider other types of social activities to be more important than dating.
34. On this floor, dating is not important.

Competition (C)

5. Around here discussions frequently turn into verbal duals.
15. People don't try to impress each other here.
25. People tend not to compete with each other on this floor.
35. People around here are always trying to win an argument.

Academic Achievement (AA)

6. People around here hardly ever seem to be studying.

16. Around here studies are secondary to most activities.

26. People here work hard to get top grades.

36. Most people here consider studies as very important in college.

Intellectuality (Int)

7. People around here talk a lot about political and social issues.

17. There is a good deal of concern about intellectual awareness on this hall.

27. People here very rarely discuss intellectual matters.

37. There is not much appreciation here for classical music, art, literature, etc.

Order and Organization (OO)

8. The RHF Hall officers function in a somewhat haphazard manner.

18. The jobs of RHF hall council officers are not clearly defined.

28. Hall procedures here are well established.

38. Hall activities are pretty carefully planned here.

Student Influence (SI)

9. The staff here decide whether and when residents can have visitors of the opposite sex in their rooms.

19. The students formulate most of the rules here.

29. The staff here have the last say about discipline.

39. Hall finances are handled exclusively by students here.

Innovation (Inn)

10. New approaches to things are often tried here.

20. Innovation is not considered important here.

30. People often do unusual things on this floor.

40. Doing things in a different way is valued here.

URES SUBSCALE ITEMS - FORM I

Respondents were asked to respond to these items as they defined the ideal floor.

Involvement (Inv)

41. There is a feeling of unity and cohesion here.

51. Very few things around here arouse much interest or excitement.

61. There is a strong sense of belongingness here.

71. Most people here have a strong sense of loyalty toward the floor.

Emotional Support (S)

42. People are concerned with helping and supporting one another.

52. Around here people tend to hide their feelings from one another.

62. Trying to understand the feelings of others is considered important by most people around here.

72. People here try to make others feel secure.

Independence (Ind)

43. People here tend to check on whether their behavior is acceptable to others on the hall.

53. People around here act and think freely without too much regard for social opinion.

63. Around here most people are not interested in up-holding most social conventions.

73. Behaving correctly in public is pretty unimportant on this floor.

Traditional Social Orientation (TSO)

44. Dating is a recurring topic around here.

54. Some people around here spend a lot of time preparing for dates.

64. People around here consider other types of social activities to be more important than dating.

74. On this floor, dating is not important.

Competition (C)

45. Around here discussions frequently turn into verbal duals.

55. People don't try to impress each other here.

65. People tend not to compete with each other on this floor.

75. People around here are always trying to win an argument.

Academic Achievement (AA)

46. People around here hardly ever seem to be studying.

56. Around here studies are secondary to most activities.

66. People here work hard to get top grades.

76. Most people here consider studies as very important in college.

Intellectuality (Int)

47. People around here talk a lot about political and social issues.

57. There is a good deal of concern about intellectual awareness on this hall.

67. People here very rarely discuss intellectual matters.

77. There is not much appreciation here for classical music, art, literature, etc.

Order and Organization (OO)

48. The RHF Hall officers function in a somewhat haphazard manner.

58. The jobs of RHF hall council officers are not clearly defined.

68. Hall procedures here are well established.

78. Hall activities are pretty carefully planned here.

Student Influence (SI)

49. The staff here decide whether and when residents can have visitors of the opposite sex in their rooms.

59. The students formulate most of the rules here.

69. The staff here have the last say about discipline.

79. Hall finances are handled exclusively by students here.

Innovation (Inn)

50. New approaches to things are often tried here.

60. Innovation is not considered important here.

70. People often do unusual things on this floor.

80. Doing things in a different way is valued here.

APPENDIX C. RELIABILITY COEFFICIENTS FOR REAL, IDEAL, AND PERCEIVED URES SCORES

Reliability Coefficents By URES Subscale

	Real	Ideal	Perceived
Involvement (Inv)	.74	.75	.68
Emotional Support (S)	.75	.74	.72
Independence (Ind)	.46	.55	.46
Traditional Social Orientation (TSO)	.65	.58	.55
Competition (C)	.57	.53	.57
Academic Achievement (AA)	.81	.75	.71
Intellectuality (Int)	.56	.57	.51
Order and Organization (OO)	.68	.65	.66
Student Influence (SI)	.22	.44	.43
Innovation (Inn)	.52	.53	.42

APPENDIX D. MULTIPLE REGRESSION SUMMARY FOR SENSE OF COMPETENCE (R AND I MODELS)

Independent Variables	Multiple R	R Square	F
Real Scores (RS)	.2899	.0840	3.81
Ideal Scores (IS)	.4231	.1791	9.07

Standardized Regression Coefficients for URES Subscales

Scale	Real	Ideal
Involvement	-.1973*	.0437
Emotional Support	.1768+	.1792+
Independence	-.1101	-.0689
Traditional Social Orientation	.0521	.0675
Competition	-.1067+	-.1030
Academic Achievement	-.0457	-.0789
Intellectuality	.0997+	.0147
Order and Organization	.0473	.0533
Student Influence	-.0348	-.0684
Innovation	.1055+	.1941*

+ significant at the .05 level

* significant at the .01 level

APPENDIX E. MULTIPLE REGRESSION SUMMARY FOR ACADEMIC ACHIEVEMENT (R AND I MODELS)

Independent Variables	Multiple R	R Square	F
Real Scores (RS)	.1634	.0267	1.14
Ideal Scores (IS)	.2649	.0701	3.15

Standardized Regression Coefficients for URES Subscales

Scale	Real	Ideal
Involvement	-.0564	.1174
Emotional Support	.0258	.0014
Independence	-.0790	-.0455
Traditional Social Orientation	-.0522	-.1213 +
Competition	-.0793	-.1089
Academic Achievement	.0433	-.0072
Intellectuality	-.0535	.0813
Order and Organization	-.0250	.0057
Student Influence	.0281	-.0621
Innovation	-.0419	-.0242

+ significant at the .05 level

APPENDIX F. LETTER OF INTRODUCTION

April 3, 1986

Dear Student

In just a few days, I'll be conducting some very important research to determine how resident students feel about their residence hall environment. The results will be used as part of my dissertation but will also provide the Office of Housing and Residence Life with very valuable information about how to improve the quality of life in residence halls at Virginia Tech.

Before I can begin, I need to establish some reliability coefficients for the list of questions attached to this letter. I would appreciate your help in accomplishing this most important task.

Please take 2 minutes to circle the most appropriate response to the questions on the next page. Then, return it to your resident advisor as quickly as possible! That's all there is to it. You'll have made a significant contribution to our program and I'll appreciate it greatly. Thanks so much for your help.

Sincerely,

Steven M. Janosik

APPENDIX G. LETTER OF INSTRUCTION

Dear Student,

Well here's your chance. The survey I mentioned to you earlier is attached. This is your opportunity to help us assess the quality of life in residence halls at Virginia Tech!

Tear this sheet off. Fill in your social security number and place of residence in the space provided on the questionnaire. Then, circle the responses that seem most appropriate. **Your answers will remain confidential and used as grouped scores only.** Remember that the survey only takes 10 minutes to complete. When you're finished, return the survey to your resident advisor as quickly as possible!

Thanks again for your help with this very important project. When its complete, I'll provide you with a summary of the results.

Sincerely,

Steven M. Janosik

APPENDIX H. LETTER OF REQUEST TO CONDUCT RESEARCH

March 22, 1986

Dr. Edward Spencer
Director of Housing and Residence Life
109 East Eggleston Hall
Campus

Dear Ed,

At long last my dissertation proposal has been approved and my Committee has given me permission to begin the data collection process. As you know, my topic involves the assessment of the quality of life in residence halls. Specifically, I am examining the student-environment fit and its relationship to sense of competence among freshmen students. A short survey instrument will be used to assess this relationship. I would like to administer this survey to freshmen living in residence with the aid of our Resident Advisor staff with your permission. Approximately 350 freshmen from 8 different buildings have already been identified as possible participants.

Administering the survey would involve: a) meeting with the Resident Advisors on the selected floors to discuss the testing procedure, b) the distribution of a letter of invitation, c) distribution of the survey, d) survey collection and, e) follow-up with non-respondents. The survey would take about 15 minutes to complete and poses no serious inconvenience to the participants. Follow-up questionnaires would be sent directly to non-respondents through campus mail. Copies of my cover letters and the instrument are enclosed for your review. With your approval, I plan to contact students during the second and third weeks of April.

Please let me know if you have questions or need additional information about this process or the research project itself. Thanks so much for your consideration.

Sincerely yours,

Steven M. [illegible]SIK

APPENDIX I. LETTER OF PERMISSION TO CONDUCT RESEARCH

Dear Steve:

Let me take this opportunity to do two things.

First, I want to welcome you back to full-time status. All of us missed not having you in the office full-time and we are pleased to have you back! Your willingness during your leave to go the extra mile was very much appreciated.

Second, I have reviewed your proposed research project outlined in your letter and enclosures of March 22, 1986 and find it to be perfectly acceptable. Thus, I certainly approve your proceeding with the project and I look forward to hearing the results. If I can assist in some way, please let me know.

Sincerely yours,

Edward F. D. Spencer
Director of Housing and Residence Life

EFDS/rmr

APPENDIX J. LETTER OF REQUEST TO ADAPT THE URES

May 21, 1986

Ms. Peggy Ferris
Permissions Editor

Consulting Psychologists Press
Palo Alto, CA 94306

Dear Ms. Ferris:

I would like to obtain permission to use the University Residence Environment Scale in a modified form as part of my doctoral dissertation. It would involve adding a Likert-type scale to the Real and Ideal short versions of the URES. A draft of the modified version of the instrument is enclosed.

The URES, in its commercial form, is not particularly useful for my research. I would, however, be glad to compensate CPP for permission to use the URES in this manner. My sample will consist of 600 freshmen. I would not need the URES manual, scoring keys, or score sheets.

I hope to hear from you soon. Please let me know if you have any questions or need additional information about this modification. Thanks so much for you consideration.

Sincerely,

Steven M. Janosik

APPENDIX K. LETTER OF APPROVAL TO ADAPT THE URES

CONSULTING PSYCHOLOGISTS PRESS, INC.

(P.O. Box 60070), Palo Alto, California 94306

Sorry for the delay. Your request was misplaced until today.

In response to your request of May 21, 1986 (Date) permission is hereby granted you to reproduce 600 copies of the URES as you have adapted it. Thank you for sending me a copy of your adaptation. You are using this to gather data for your doctoral dissertation.

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