THE RELATIONSHIP OF HOMOGENEOUS HOUSING AND GENDER TO THE PSYCHOSOCIAL DEVELOPMENT OF ENGINEERING AND HONORS STUDENTS

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CHAPTER I

INTRODUCTION

> Residence halls can provide ready-made communities for students. Because the college can vary the mix of students, place trained student staff members on site, organize developmental activities, and alter the arrangement of rooms and furniture ..., residence halls have great potential for fostering development of competence, management of emotions, autonomy and interdependence, and mature interpersonal relationships. They can also inhibit development if they are operated in loco parentis or create an overly protective (or homogeneous) environment with few intellectual and social challenges. (Chickering and Reisser, 1993, p.275-276).

For sometime, educators and researchers have been asking questions about the effect of residence halls on students (Blimling, Pascarella, & Terenzini, 1994). The residence halls were thought to provide an intellectual and social environment conducive to academic success. This philosophy was supported in 1937 when the American Council on Education published the Student Personnel Point of View. This statement described the responsibilities of student personnel administrators which included: "Assisting the student to reach his maximum effectiveness through clarification of his purpose..., and through progression in religious, emotional, social development, and

other nonacademic personal and group relationships." (American Council on Education, 1937).

For more than sixty years, student affairs practitioners and theorists have explored and supported the notion that the campus environment, and residence halls in particular, impact the development of students. The importance of the impact of residence hall living has been an integral part of higher education in the United States from its early days to the present as exemplified by the historical perspective (Cowley, 1934) to the current standards set by the Council for the Advancement of Standards for Student Services/Development Programs (1986). The mission of residential living has several goals that include providing a "living-learning environment that enhances individual growth and development" (p.51, CAS Standards).

While residence halls administrators have been aware of the residence hall environment and its impact on development, the large increase in enrollment in the 1960's and 70's resulted in a residence hall building boom with little regard for the effect on student development. In order to accommodate the large number of students, huge residence halls were built without regard for the social implications. Halls were built with small rooms, long corridors, built-in beds, desks and dressers, and cramped lounges (Blimling & Miltenberger, 1990) to accommodate as many students as possible.

Currently, residence halls and campus administrators are aware that the residential environments that were created in the 60's and 70's are restrictive both physically and socially. These administrators have sought to change these environments in order to make them more congruent with the mission of the university. One way to create this change is to remodel the physical environment, by renovating old residence halls. However, the newer halls, which are scarcely 25 years old, are unlikely targets for renovation. Therefore, another way must be sought to restructure the

environment in the halls constructed in the 1960's and 70's. A plausible way to restructure these newer halls is by reorganizing them socially.

The residence halls can be viewed as an intervention medium. Student affairs administrators in charge of residence halls have determined ways to shape the environment in these living units so as to maximize the experience of students. Banning (1974) advocated the creation of environments that promote student learning. A psychosocial approach to maximize the experience of students is through programmatic interventions that have been designed to help achieve certain academic and social goals. The achievement of these goals involves the implementation of social groupings that will produce greater academic performance, better retention, an improved social climate, greater satisfaction with the university experience, increased involvement in social activities and greater personal growth and development (Pascarella & Terenzini, 1991). One intervention aimed at achieving these outcomes has been the grouping of residence hall students into homogeneous groups according to certain criteria such as academic ability, academic classification, and major of study (Blimling, 1993).

Need For The Study

In recent years, researchers have studied the impact of on campus living on students (Blimling, Pascarella & Terenzini, 1994). Residence hall living creates a social and psychological environment for students that is very different than the one created by students who live off-campus and commute to college. Student affairs practitioners intentionally structure environments on campus in order to promote student development by maximizing opportunities for students. These opportunities include social, cultural, and extra-curricular involvement. These involvement opportunities are believed to impact student development positively (Pascarella, Terenzini, & Blimling; 1994).

The influence of different on campus living arrangements on the academic performance of students was one of the most researched topics in the area of student affairs (Blimling, 1993). Blimling (1989) used meta analysis to integrate and summarize the empirical research from 1966 through 1987 regarding the influence of college residence halls on the academic performance of undergraduate students in the United States. He concluded that research did not show that living in a conventional residence hall significantly influenced academic performance as compared to living at home and commuting to college. He also concluded that living in special or intentionally structured housing arrangements such as a "quiet" study floor or honors house did positively influence the performance of a certain group of students.

While Blimling's (1989) conclusions do not support an overall positive effect for living in residence halls, the results may be impacted by the types of students and the variables studied. Most of the research on the impact of different campus living arrangements, however, has been limited to examining the impact of homogeneous arrangements on academic performance of students. One such study involved assigning high ability students to live together in residence halls (DeCoster, 1968). The results of the study indicated that homogeneously assigned high ability students performed better academically than high ability students assigned at random throughout residence halls.

Whenever students are assigned in homogeneous grouping they tend to create a "normative peer culture" that rewards the values and behaviors in which these students excel already, i.e. exceptional academic performance. On one hand, these homogeneous interventions in residence halls can be seen as a positive way to foster the educational environment. On the other hand, when students are grouped in a residence hall to advance a special goal, they "lose something of the experience of diversity gained from others in less specialized living arrangements" (Pascarella, Terenzini, & Blimling 1994, p. 25). From the studies involving homogeneous grouping of students thus far, there appears to be evidence to support certain kinds of positive impact on development and

other outcomes that may actually hinder development. This would seem to support the need to continue to explore the variables associated with homogenous group living.

From these studies, it appears important to examine the effect of homogeneously structured environments in residence halls on outcomes other than academic performance. All growth processes as they relate to the positive and negative aspects of homogeneously grouping students in residence halls need to be investigated. These processes should be evaluated and utilized to make decisions on promoting the practice of homogeneously grouping students in residence halls. The effect of living on a homogeneously grouped residence hall floor on the psychosocial development of students is one of the areas in need of further research and exploration and is the focus of this study.

Purpose of the Study

Existing research has focused on the effects of homogeneous residence arrangements on academic performance, persistence and graduation, involvement and satisfaction (Pascarella, Terenzini, & Blimling, 1994). Research is virtually nonexistent on the impact of homogeneous residential living arrangements on the dimension of psychosocial development of students. Therefore, the purpose of this research is to determine the impact of homogeneous housing of students on the psychosocial dimension of their development and to expand the knowledge and research base on development in the areas that have been lacking.

Research in the area of homogeneous housing of students by academic major has also been skewed toward selecting samples of male students. This is especially evident in majors that have been historically dominated by males such as engineering. Therefore, this study aims to shed some light on the effect that gender has on the psychosocial development of engineering and honors students.

The relationship between living on campus and positive effects on the psychosocial development of students has many implications for student affairs administrators. By intentionally structuring living environments that maximize the opportunities for involvement, student affairs administrators are able to impact several educational outcomes. In turn, these structured experiences have powerful implications as they relate to advancing and supporting the educational mission of the university.

Statement Of The Problem

Research on residential living arrangements has focused on the on-campus and off-campus housing and has dealt with certain outcome variables. However, there is no consistent study in the literature of psychosocial development as it relates to homogenous living arrangements.

The question examined in this study: What is the relationship of homogenous housing and gender of engineering and honors students to selected measures of psychosocial development?

Definitions of Terms

Homogeneous Environments: Residence hall floors where the majority of students are intentionally grouped using one dominant criterion such as academic major.

Heterogeneous Environments: Residence hall floors where students are assigned randomly without any criteria being intentionally dominant in that environment, for example, a floor with students with many educational disciplines, different academic ability, and different academic classifications represented.

Establishing and Clarifying Purpose Task: This is a developmental task that assesses definition of educational goals, self-directedness, and interest in other cultures.

This task also assesses the students' ability to formulate appropriate career plans and the ability to structure their lives to meet their needs. (Winston & Miller, 1987).

Developing Mature Interpersonal Relationships Task This is another developmental task that assesses the characteristics of the students' relationship with peers, their appreciation of individual differences, and the level of freedom from needing continual reassurance and approval of others (Winston & Miller, 1987).

Academic Autonomy Task This task assesses the students' ability to deal with ambiguity and to monitor and control their behavior in ways that allows them to attain personal goals and fulfill responsibilities (Winston & Miller, 1987).

Levels of Student Development: Generally, student development involves growth and maturity along several dimensions, including; social, intellectual, emotional, physical, vocational, and spiritual. For the purpose of this study student development was operationally defined as scores on the Student Development Task and Lifestyle Inventory (Winston & Miller 1987).

Developmental Task: A construct used to measure human development in college students. It is a set of behaviors and attitudes that are interrelated and which the culture specifies should be exhibited at approximately the same time by a given age cohort in the designated context of higher education (Winston & Miller, 1987).

Assumptions and Limitations

1. It is assumed that the subjects who participate in this study do so voluntarily.
2. Another assumption is that the intervening variables of students in homogenous housing will be the same as for students in heterogeneous housing.
3. A third assumption is the Student Developmental Task and Life Style Inventory accurately assesses the constructs of student development.

4. A limitation of this study is that the subjects who participate in the study may not be true representatives of all the students in the target groups because they are volunteers.
5. Another limitation is that the subjects will be selected from one university, and, hence, the generalizability of the results will be limited.
6. The study will involve intact groups on the floor and there will be no random selection of subjects which may affect the generalizability of the results.

Significance Of The Study

This study will be beneficial in helping student affairs administrators evaluate homogeneous living environments in residence halls using criteria other than academic performance. The exploration of the relationship of homogeneous housing to student development of male and female engineering and honors students can help in designing environments that emphasize the values of the educational institution. Since students choose to live in homogeneous environments, the added information will assist student personnel practitioners in making decisions regarding special interest housing. It is crucial that educators, administrators, parents, and students understand that academic performance, while it is not unimportant, is only one of the outcomes of college. As more outcomes of living in homogeneous housing are being investigated, the more beneficial residence hall living can become for the students and the university. Finally, this study will add another piece of knowledge to facilitate the understanding of homogeneous housing and its relationship to the development of male and female students in college residence halls.

Research Hypotheses

This study examined three null hypotheses:

1. There will be no significant differences across groups of students living in different types of housing on the ten psychosocial dimensions as measured by scores of the Student Development Task and Lifestyle Inventory.
2. There will be no significant differences between women and men on the ten psychosocial dimensions as measured by scores of the Student Development Task and Lifestyle Inventory.
3. There is no significant interaction between gender and type of housing on dimensions of psychosocial development as measured by scores on the Student Development Task and Lifestyle Inventory.

Organization Of The Study

Chapter 1 has identified issues important to the study of homogeneous housing of residence hall students by academic major. The impact of residence halls on college student outcomes was briefly discussed. Also discussed were the different social arrangements that are available in residence halls and their impact on college students. The lack of research in the area of student development as it relates to homogeneous housing of students with similar academic majors was identified as the purpose of this study. This chapter also provided the rationale for the significance of the study to the area of student development as a way to structure environments intentionally for positive impact on students.

Chapter 2 encompasses an overview of the literature related to college student development, psychosocial development, the impact of residence halls on students, and the impact of special interest housing. Chapter 3 describes the methodology. This chapter also presents a description of the sample, the instrumentation, the research

design, and the procedures used. Chapter 4 presents results of the study and analyses of the data. Chapter 5 provides a discussion based on the conclusions of the study and presents recommendations.

CHAPTER II

REVIEW OF THE LITERATURE

The practice of student affairs stems from two underlying assumptions; first, student affairs practitioners believe that the acquisition of knowledge is an outcome of higher education. A second, and equally important, outcome is the development of the whole person. These two concepts have been at the heart of the practice of student affairs since the beginning of higher education in the United States.

While student development or student affairs has been a term used in recent years as exemplified in the Student Personnel Point of View (American Council on Education, 1937), the concepts and practices have remained relatively stable since the establishment of Harvard in 1636 as the first institution of higher education in the United States. So, for more than 350 years, those who have been engaged in the student personnel activities of the institutions of higher education have been concerned with multiple dimensions of development, not just intellectual development.

American colleges and universities were modeled after the English residential colleges, which were founded on the principle of in loco parentis (in place of parents). These early American colleges had an approach to education that focused not only on the intellectual needs of the students but also on their social, moral, and spiritual needs (Fenske, 1989). Residence halls, originally referred to as dormitories, were an essential component of the early American university. Until the time of the civil war, faculty were expected to be involved with students outside of the classroom; they were expected to

monitor students and to assist in their wholistic development. The residence halls "were designed to bring faculty and students together in a common life which was both intellectual and moral" (Brubacher & Rudy, 1968, p. 42). In the early days, faculty fulfilled the role of a student development educator.

After the Civil War, the German model of the university began to influence the American universities. The German model emphasized research. This influence contributed to a change in focus from development of the character of the student to less personal involvement with students. It was also during this time that there began to be a role for student affairs practitioners as faculty were less involved in these functions.

The creation of land-grant colleges in the nineteenth century added the idea of service to the mission of higher education institutions. Faculty were expected to provide service to the public. The increased demands on faculty's time further decreased their involvement with students outside the classroom (Boyer, 1990). In addition, the land-grant colleges opened the door to more students to attend universities in particular to students from working class families. University presidents responded to the out of classroom needs of students by establishing the position of the dean of men. This dean became in charge of the out-of-classroom activities of students (Cowley, 1937).

From the early 1900's, the need for student affairs administrators and practitioners, who fulfilled a role previously held by faculty, became evident. It is one of the functions of this role of the student affairs practitioners in the development of students that will be explored in this study. The following review of the literature will focus on the theoretical underpinings of the study, the impact of residence halls on students, and the impact of special interest groupings on students.

Theoretical Foundation

In exploring the relationship of the residence hall environment to the development of students, it is necessary to examine the theories that attempt to explain

student behavior and development as well as those that explain the environmental context within which that development occurs. Theories that explain development of the individual assist in understanding and anticipating student behaviors and issues. Theories aimed at understanding the environmental milieu help practitioners to understand behavior within its context.

Student development theories are the theoretical foundations upon which student affairs practice is based. Student development theories describe stages that students encounter while they mature. Student affairs staff design programs and services that anticipate students' developmental stages or respond to issues or problems based on student development theory. Student development theory may be conceptualized from various approaches including:

1. Psychosocial development (Erikson, 1963; Chickering, 1969)
2. Cognitive and moral development (Perry, 1970; Kohlberg, 1969)
3. Ego development (Loevinger, 1976)
4. Maturity models (Heath, 1968)
5. Typology models (Heath, 1973)

For the purpose of this study, theories of psychosocial development, cognitive/moral and ego development are likely the most useful. These theories are more complete and have been tested through empirical studies more than the maturity and typology models. They also seem to be most closely related to the variables of this study.

Psychosocial Development

Psychosocial theories combine the understanding of psychological and social theories in an environmental context. Psychosocial theories suggest that individuals develop through a sequence of stages throughout their life span. Each developmental stage requires the formation of new understandings of personal issues, an increase in

social skills, and the assumption of new roles. A developmental stage is a period of time during which the environment stimulates an internal challenge within the person. The person has to resolve to some degree of success the issues or concerns related to each stage before proceeding to the next stage. These psychosocial stages are sequential and cumulative, with advanced stages dependent on earlier stages. Theorists have described the developmental characteristics of these stages (Erikson, 1965; Chickering. 1969). While Erikson described the stages in terms of the entire life cycle, Chickering (1969) concentrated on describing the development of the traditional age college students. Chickering (1969) described the psychosocial development of students and identified his stages as "vectors".

Erikson: Psychosocial development theory, as proposed by Erik Erikson (1963), offers student development practitioners a method of thinking whereby they can determine who students are and how their development may be inhibited or enhanced by the college environment (Widick, Parker, & Knefelkamp, 1978). While Erikson's (1963) theory of social development is one of human psychosocial development which focuses on ego development and covers the total life span, it is foundational to psychosocial student development. Although Erikson takes many of his ideas from the psychoanalytic perspective, he focuses on the positive qualities of human beings. Erikson's psychosocial theory advances the idea that humans develop within social institutions that encourage growth. According to Erikson, an individual develops through a sequence of stages that define the life cycle. Furthermore, Erikson (1963) theorized that an understanding of the external environment as well as the internal dynamics of the individual are essential to the understanding of human development. A person must be viewed in both a psychological and social context. The person's development and movement through life occurs through interaction with family, friends, and social

institutions. The person's internal growth and the interaction of the person with the environment results in the emergence of the ego. The emergence of the ego is central to Erikson's theory.

Erikson (1963) described eight stages of development. Each of these stages may be seen in terms of personal challenge. Once an individual succeeds in accomplishing the tasks associated with each stage, then the person will acquire additional strength in their ego. Erikson's stages are titled by polar orientations: 1) Trust vs. Mistrust, 2) Autonomy vs. Doubt and Shame, 3) Initiative vs. Guilt, 4) Industry vs. Inferiority, 5) Identity vs. Role Confusion, 6) Intimacy vs. Isolation, 7) Generativity vs. Stagnations, 8) Integrity vs. Despair. Erikson did not specifically address the developmental issues of college students, however, the two stages of identity vs. role confusion and intimacy vs. isolation are associated with adolescence and young adulthood and encompass the traditional age of college students. Arthur Chickering (1969) championed the task of specifically addressing the psychosocial development issues of college students.

Chickering: The theory of student development most closely related to this study was articulated and developed by Arthur Chickering (1969). It is based on the work of Eric Erikson's (1963) theory of psychosocial development of humans. Chickering (1969) viewed the traditional-age college student as an individual who is passing through a number of developmental stages that are a result of developing internal capabilities while interacting with the demands of a particular college environment (Widick, Parker & Knefelkamp, 1978).

Chickering (1969) investigated the experiences of undergraduate students at ten liberal arts colleges in the United States. He observed that students' development occurred in a number of psychosocial ways in addition to their intellectual development.

His findings led him to the development of seven vectors. Chickering's vectors are cited as an important conceptualization of the development of college students. He wrote that the work of Erikson (1963) introduced the concept of identity development, "and in so doing sharply reminded us that there is more to development in college than acquiring information and developing intellectual competence" (Chickering, 1969, p.x). Chickering has revised his theory in order to incorporate new research findings and include wider and more diverse student populations (Chickering & Reisser, 1993).

Chickering's (1969) seven vectors are:

1. Developing competence. This is the primary area of growth in young adults and focuses on the development of three competencies: intellectual, physical and social.
2. Managing emotions. At this stage, students increase their awareness of their own feelings and integrating these feelings into their personality and the ability to control and express these feelings in an appropriate manner.
3. Developing autonomy. This vector emphasizes the development of emotional independence, self-direction, persistence, and the ability to solve problems. Chickering desired to emphasize the importance of the task of interdependence in his revised theory and renamed this vector; Moving Through Autonomy Toward Independence (Chickering & Reisser, 1993).
4. Establishing identity. Developing a positive identity involves the ability to integrate the preceding vectors. It is described as an attitudinal and perceptual change that involves coming to terms with one's physical and sexual self. "Arriving at an accurate, realistic picture of self seems to encourage experimentation in the realms where decisions are required: relationships, purpose and integrity" (Widick, Parker & Knefelkamp, 1978, p. 24). Establishing identity is the central focus in Chickering's (1969) theory. In Chickering and Reisser's (1993) revision of the original vectors this task is placed as the fifth vector.

5. Freeing interpersonal relationships. This vectors title has been revised to Developing Mature Interpersonal Relationships (Chickering & Reisser, 1993). Chickering proposes that while in college student develop increased tolerance and acceptance of others and also develop mature and intimate relationships. In Chickering and Reisser's (1993) revision of the original vectors, this task is placed as the fourth vector.
6. Developing purpose. There are several factors that are associated with this vector; assessment and clarification of interests, developing academic and vocational goals, and establishing strong interpersonal commitments.
7. Developing integrity. At this stage, students define a set of values that are congruent with their actions. Students usually move through several stages of moral development that help them progress from a dualistic, rigid, and moralistic thinking to a more humanized and personalized value system that takes into consideration the diversity of values.

One of the main arguments that Chickering advances, and that is of particular interest to this study, is that educational environments exert a powerful effect that helps students progress through the seven vectors of development (Chickering and Reisser's 1993). By drawing on the work of Sanford (1966), Chickering (1969) stresses the importance of challenge and support in student development. He presents the environment as presenting a challenge which encourages a response and ultimately brings about developmental changes. Chickering's seven vectors contribute to the formation of the person's identity by accomplishing certain tasks that are demanded by society. Such tasks include the ability to think, become independent, and start a career. Chickering's vectors use psychological terms in describing the range and nature of those tasks. Also, the vectors describe the main concerns of the students. College students move through these vectors at different rates.

Cognitive/Moral Development

Cognitive and moral development have been two of the foci of student development theory, particularly that of Perry (1970), intellectual development, and Kohlberg (1969), moral development. Knowledge of intellectual and moral development have been the subject of many studies and, while it is not unimportant to our current study, we need additional information related to other dimensions of development to explain the dynamics of this study.

Perry: The first systematic attempt to investigate the intellectual development of college students was conducted by William Perry (1968). In a longitudinal study that lasted from 1954 until 1963, Perry studied 112 Harvard students and 28 Radcliffe students. He used the interviews with these students to compose the progression of college students' cognitive development (Evans, 1996). Perry's theory outlines a continuum of development that constitutes nine stages. Most reviews of Perry's work group his theory into four major categories (King, 1978):

1. Dualism: In this stage, students believe that there are right and wrong answers and that the established authorities in different disciplines have the right answers.
2. Multiplicity: Students acknowledge that there are multiple answers to a given problem and that multiple opinions can be equally valid. Also in this stage, students' reliance on the authority to have the correct answer diminishes.
3. Relativism: At this stage, students are able to make judgements based on the evidence and the merits of the argument being presented. Students can see how the pieces of an issue can fit together to make a larger answer, they recognize the existence of the big picture. Also in this stage, authorities are viewed as valuable contributors based on their expertise.

4. Commitment in Relativism: Students who arrive at this stage develop commitments in several personal areas such as marriage, religion, and career. Students recognize the differences in the world and accept their own values as valid and they are able to live in pluralistic world as their own person.

Kohlberg: Moral development is similar to cognitive development in that the students develop their decisions making abilities in a hierarchical and sequential fashion. Kohlberg (1974) studied the answers of boys ages 10 to 16 to hypothetical moral dilemmas and identified six stages that he grouped into three levels:

1. Preconventional Level: At this level, the consequences of one's actions determine the understanding of right and wrong actions. Furthermore, decisions in human relations are made based on reciprocity and sharing equally. The attitude may be one of conformity to the social order present at the time.
2. Conventional Level: To maintain the expectation of the students' family or friends is viewed as important in its own right without the motivation of the consequences. The student moves from conforming to a social order to being loyal to it. The student will also interpret good behavior as one that helps or pleases others and gains approval.
3. Postconventional Level: At this level, the student is able to understand the importance of moral values on their own merit and follow the ones that society established.

Moral development is also similar to cognitive development in that it occurs as a response to a situation that disrupts the students present way of thinking (Smith, 1978) Kohlberg (1974) proposed that moral development occurs naturally as a result of the continuous interaction of the person and the environment. The environment that the students live in creates situations that confront the social and moral views of students.

The discussions and interactions with others stimulate the development of moral reasoning.

Ego Development

Ego development is a concept that encompasses several developmental processes of moral development, cognitive development, and interpersonal development. Jane Loevinger (1976) developed a model of ego development. Loevinger saw the person as a coherent whole where many parts of his/her thought, character, and interpersonal relationships grow at once. Knefelkamp, Parker, and Widick (1978) observed that "Ego development symbolizes the whole of the person that is greater than the sum of its parts". Loevinger's (1976) ego development theory is comprised of ten stages:

1. Pre-social stage: At this stage, the individual has not yet learned to differentiate himself/herself from his surroundings.
2. Symbiotic Stage: During this stage, the infant has not been able to differentiate himself/herself from the primary care giver.
3. Impulsive Stage: This stage is characterized by the ability of the child to affirm his/her own identity as different of others.
4. Self Protective Stage: At this stage, the impulses are controlled by the child and the child recognizes that there are consequences for actions.
5. Conformist Stage: During this stage, the individual recognizes that his/her own welfare is tied to that of the immediate family or peers.
6. Self Aware Level: This is a transition level between the conformist stage and the conscientious stage. The two features of this level are increased self-awareness and the ability to understand multiple perspectives of an issue.
7. Conscientious Stage: During this stage, the person develops a true capacity for empathy as well as a sense of responsibility.

8. Individualistic Level: This is a transition from the conscientious to the autonomous stage. At this level, the person becomes more tolerant of others and accepts differences of others as legitimate characteristics.
9. Autonomous Stage: The individual at this stage views reality as complex and with multiple views. During this stage, the person acknowledges his/her interdependence and allows other to be autonomous.
10. Integrated Stage: Loevinger describes the person at this stage as one who has transcended the conflicts of the autonomous stage.

Systems Theory

All educational environments, whether residence halls, academic departments, student organizations, special interest floors, or entire campus share the characteristics of organized systems. In order to best understand the connection between student development and the environment in which the students live and learn, we need to understand the many variables that affect student development. Systems theory offers the means to understand how many variables work together to affect student development within residence halls and specifically on special interest floors. Special interest floors, such as the ones that are the focus of this study are one part of a residence hall system. This system is an "entity" that is comprised of interconnected pieces that are grouped to advance a perceived goal (Kurpius, 1985). The systems approach assists us to understand that because a system is made up of several pieces and because these pieces influence each other, a change in one variable will have an effect on other parts of the system (Williams, 1978). There are three key concepts in systems theory; open systems, equifinality, and structural change versus human behavioral change (Fuqua & Kurpius, 1993).

Open system is a concept that accentuates the interaction of the environment and the organization. The long-term survival of an organization or a system is contingent on its ability to manage and monitor the variables in its environment (Fuqua & Kurpius, 1993). Equifinality is another concept of systems theory that implies that different paths may lead to the same result. This is a fundamental idea that since a system is dynamic and interdependent, then, a certain goal or intervention can be accomplished through a variety of means. The concept of structural change versus human behavioral change is the third key concept of systems theory. Since systems are interdependent, the focus on changing the person's behavior only may be an inefficient way to solve certain problems, therefore a change in a person's behavior accompanied by structural change may provide a more lasting and effective result (Fuqua & Kurpius, 1993). The three concepts described are useful in helping us understand systems theory and may be applied to the understanding of special interest housing.

A systems approach provides for a more comprehensive understanding of the multiple variables that affect special interest housing impact on students. Understanding the multiple factors that affect the psychosocial development of students in addition to their interaction with the campus environment is a guide to understanding complex systems such as special interest floors and their impact on student development. A special case and application of systems theory that is specific to a university setting is campus ecology theory.

Campus ecology is the study of the relationship between students and their campus environments (Banning, 1989). Lewin (1936) suggested that behavior is a function of the person in interaction with the environment. Campus ecology theory views the university setting and its participants as part of a system and, therefore, campus ecology may be thought of as a system's perspective on the higher education setting.

Banning (1989) advocates that student environments should be developed using an ecosystem model. He also suggests that changing the system is sometimes the appropriate intervention. A seven step theoretical model was developed by Banning (1989) to asses and redesign student environments. The seven steps are:

1. Developing values for the students living in the environment in question
2. Setting goals based on the identified values
3. Initiating programs and services that implement the values and goals
4. Assigning the student the appropriate environment by finding the right fit
5. Assessing and evaluating the perception of the student to the environment
6. Observing the behavior of the students in the new environment
7. Providing feedback to determine if the student behavior is congruent with the values outlined for the particular environment.

The above model provides a systematic method of planning campus environments that meet the needs of student development.

In the setting of this study, the system in question is the special interest housing floors that were developed by administrators. In one sense, the author is using the above model to assess and evaluate the perception of the students to the environment through this study and providing feedback to administrators to determine if special interest housing environments are meeting the goals set for them by the administration.

Summary

The above discussion provides an overview of some of the theories and models which are applicable to working with college students. There are multiple ways in which students mature. One way is psychosocial development, where we assume that

students as they mature can handle more intense emotions, establish life and career goals, and become aware of their own identity and purpose.

As students grow, they become more complex in their thinking and are able to personalize their values. Cognitive theories, on the other hand, explain the changes that occur in the students' way of thinking as he/she encounter an idea, problem, or dilemma that demands a new way of thinking. While ego development theory encompasses a multi-developmental process of moral, cognitive, and interpersonal development.

Just as the development of the student has multiple variables, the environment where the students reside is comprised of several variables. Therefore, one must look at the environment from a systems' perspective. The ecosystem model is based on the belief that a campus environment encourages or inhibits students behavior.

The Impact of Residence Halls on Students

Residence halls impact students in many ways. Pascarella and Terenzini (1991) synthesized the research on the impact of college on students. They found that a number of positive effects are a result of living on campus. They also concluded that living in residence halls versus commuting to college is perhaps "the single most consistent within college determinant of impact" (p.611). Blimling (1993) identified six outcomes used to measure the impact of residence halls versus living off-campus. These outcomes are: academic performance, involvement and satisfaction, values and attitudes, student development, persistence and graduation, and general cognitive growth.

Academic Performance

The largest body of research on residence halls involves comparing residence hall students with those who live off-campus on the basis of their grade point averages

(Blimling, Pascarella & Terenzini, 1993). Nowack and Hanson (1985), conducted a study that compared the academic achievement of residence hall students to non-residence hall students. They concluded that students living in residence halls earn significantly higher GPA's than their off-campus counterparts. They also reported that there were no significant differences between the GPA's of men and women who lived in the residence halls. Some studies supported these findings and others did not. One study, conducted by Taylor and Hanson (1971), reported no significant differences in academic performance between students living on campus and those who do not. Another study by Simono, Wachowiak, and Furr (1984) observed that commuter students earned higher GPA's than students living in residence halls. None of these studies controlled for pre-college differences.

Blimling (1989) attempted to resolve this issue of the impact of residence halls on academic performance by conducting a meta analysis on the influence of college residence halls on the academic performance of students. His work supported that living in a college residence hall does not significantly influence the academic performance of students. These findings were reached after controlling for past academic performance.

Results of earlier studies on the effect of residence halls on academic performance of students were inconclusive. One of the major problems with these studies was lack of control for past academic performance. The meta-analytic study by Blimling (1989) indicated that there were no significant differences in academic performance of students who lived on campus when compared with students living off-campus.

Involvement and Satisfaction

Many studies indicate that students living in residence halls are more involved than students commuting to campus (Blimling, 1993). Residence hall students are significantly more likely to use campus facilities and to be involved in extracurricular activities (Chikering, 1974). In a study by Pascarella (1984) on the effects of living on campus, he reported findings that were consistent with the above results. Chickering (1974) also indicated that increased involvement resulted in a significant increase in satisfaction with the college experience. These findings were supported by Welty (1976). Significant increase in involvement and satisfaction of residence hall students as compared to their commuting counterparts persisted with controls for pre-college characteristics. These controls include; academic aptitude, high school extracurricular involvement, size of high school, socioeconomic status, student body selectivity and private or public status (Pascarella, 1985).

There are a few studies that report differing results from most studies on the topic of involvement and satisfaction. Dollar (1966), and Ryan (1970) did not find any significant differences between residence hall students' satisfaction with their experience when compared with their commuting counterparts.

Most studies indicated that residence hall students are significantly more involved in extracurricular activities than their commuting counterparts. Research also supports that students living in the residence halls show greater satisfaction for the most part than students who commute to campus.

Values and Attitudes

In a study that compared educational outcomes for commuter and residence hall students, Chickering, McDowell, and Campagna (1969) found significant differences in

the values and attitudes of the two groups. Residence hall students experienced greater value changes in the areas of: cultural and intellectual values, religious liberalism, and social and political progressivness. These significant differences were evident even with controls for pre-college values, gender, socioeconomic status, ethnicity, and aptitude. These results were supported later by Chickering and Kuper (1971) and Welty (1976).

Research in the area of values and attitudes of residence halls students as compared with off-campus students is sparse. However, the available research suggests that students living in the residence halls tend to become more liberal in their attitudes and values when compared with students commuting to campus.

Student Development

Lungren and Schwab (1979) studied the impact of college on students from a residential context. They compared students who live on campus with those who commute to campus. Students who live on campus exhibited significantly greater gains in autonomy and inner directedness than their counterparts who commute. Similar results were obtained by Sullivan and Sullivan (1980). They studied male students who lived on campus and compared them with male students who lived at home and commuted to college. They found that student who live on campus gain significantly in their goal of becoming independent.

Baird (1969) compared freshman students living on campus with their counterparts who commute to campus. He found that students living in conventional residence halls did not have significant differences in intellectual orientation than their counterparts who commuted to campus. Chickering and Kuper (1971) found that students living on campus tend to make significantly greater positive gains in the area of

intellectual orientation than their counterparts who live off-campus. These results were affirmed by Welty (1976).

Living on-campus also did not significantly affect academic and social self-concept or relationships with peers and faculty. Pascarella (1984) reached this conclusion when he compared residents who live on-campus with those who commute to college. These results were evident even after controlling for academic ability, gender, and pre-college levels of the perspective trait.

Students living on campus experience greater gains in autonomy, inner-directedness, and intellectual orientation when compared with students who commute to campus. However, living on-campus does not seem to effect any changes in self-concept.

Persistence and Graduation

Students who had the experience of living in a residence halls are more likely to remain in college and to graduate than students who have not had such an experience. Anderson (1981), used a national longitudinal study to determine the effect of college experiences on attrition. Among her findings was that student who lived off-campus were significantly more likely to drop out of college during the first and second years of college than other students. Other studies confirmed these findings. Pascarella and Terenzini (1991), in synthesizing the research in this area, supported the hypotheses that living in the residence halls has a positive influence on persisting and graduating from college. These findings remained constant when differences in past academic performance, socioeconomic status, and aptitude were controlled (Pascarella, 1984). Astin (1977) analyzed a large national data base and estimated that living in residence

halls adds about 12 percent net advantage to a students' chance of persisting in college and attaining a degree.

Even when controls for pre-college characteristics are applied, students who have the experience of living in residence halls are more likely to persist in college and graduate. There does not seem to be any evidence that contradicts the above research.

General Cognitive Growth

Limited research exists on the impact of living on-campus on the general cognitive growth of students. In a 1993 study, Pascarella estimated the gains that freshman made during their first year in college in several areas; reading comprehension, mathematical reasoning, and critical thinking. The researchers compared residence hall students to commuter students. They found that residence hall students had significantly larger gains in critical thinking and larger gains in reading comprehension that were marginally significant. When controls for pre-college level of cognitive ability, academic motivation, work responsibilities, freshman year credit hours, and age were applied, researchers did not find any significant differences between the two groups in the area of mathematical reasoning. This is the only study of its kind and it suggests that living in residence halls versus commuting to campus has a positive influence on the general cognitive growth of students. This is especially true in areas such as critical thinking and reading comprehension.

Summary

From the above summary of current literature on the impact of residence halls on students we conclude that a number of dimensions of living in the residence halls has a positive impact. These dimensions include; involvement and satisfaction, student

development, persistence and graduation, and general cognitive growth. There was no significant impact from the academic performance. Overall, living in residence halls seems to help students in their development.

The Impact of Special Interest Grouping on Residence Hall Living Arrangements

In the previous section, the impact of residence halls was examined as a total system. In this section, various intentional designs of the environment are examined in an attempt to isolate factors that specifically impact student development. Residence halls administrators intentionally structure the environment in the residence halls to produce desirable educational outcomes (Moos, 1976). In this section, four different socially structured environments will be reviewed; homogeneous housing of students by gender, homogeneous housing of students based on academic ability, homogeneous housing of students based on academic classification, and, finally, homogeneous housing of students based on academic major.

Homogeneous Housing of Students by Gender

Research in the area of homogeneous housing of students by gender has been limited to four outcomes. These outcomes are; academic performance, involvement and satisfaction, values and moral judgment, and student development. A relatively small body of research addressed each of these outcomes. Research was lacking in the areas of persistence and graduation and general cognitive growth. In all of the studies, student living in coeducational residence hall units were compared with students living in single sex units.

In a study that compared students living in a single sex hall with students living in a co-educational residence hall, Moos and Otto (1975) found that there were no

significant differences on academic achievement between students who lived in a co-educational hall and their counterparts who lived in a single sex hall. These results were consistent for both men and women. Schoemer and McConnel (1970) concurred with the above results.

There does not seem to be any evidence that supports the hypothesis that living in a single sex hall improves the academic performance of students. This is also true for male and female students. There is no significant difference in academic performance between students living in a coeducational environment and others who live in single sex environments.

When Moos and Otto (1975) studied the effect of living in a co-educational hall as compared to living in a single environment on the drop out rate of male students, they found that there were no significant differences on the drop out rate between men who lived in a co-educational hall and those who lived in an all male residence hall. However, a significantly greater proportion of women students in the co-educational residence halls dropped out of school or transferred out of their living unit as compared with their counterparts living in an all female residence hall.

There was only one study that addressed attrition and homogeneous living units. Living in a co-educational residence hall seems to affect the drop out rate of men and women differently. Whereas living in a coeducational environment does not affect the drop out rate of men as compared with their counterparts living in single sex halls, the drop out rate of women in coeducational residence halls seem to be significantly higher than their counterparts in all women residences.

Moos and Otto (1975) reported that female students who lived in a co-educational environment significantly increased in their social activities as compared to

female students who lived in a single sex hall. In addition, they found that men in co-educational living environments expected significantly more emphasis on involvement than did their counterparts in single sex halls. Brown, Winkworth, and Braskamp (1973) were able to support the finding that women living in co-educational residence halls were more significantly involved in extracurricular activities or projects than their counterparts who reside in a single sex environment.

Blimling (1993) synthesized studies that dealt with co-educational living environments and their effect on participation in extracurricular activities. He concluded that there were no significant differences between the level of involvement and participation in extracurricular activities between students living in coeducational and single sex residences.

Research is inconclusive as to the effect of co-educational residence halls on the involvement and satisfaction of men who live in these halls. On the other hand, evidence seems to support slightly the notion that women in co-educational residence halls are more involved than their counterparts in single sex halls.

A study by Lance (1976) reported that male and female students living in a co-educational residence halls changed their attitudes about sexual permissiveness after living in a co-education hall for one year. In a pre-test at the beginning of the year, there were no significant differences in sexual permissiveness of students in co-educational residence halls as compared with students in single sex halls. However, a posttest at the end of the year showed that students in co-educational residence halls were characterized by greater sexual permissiveness than their counterparts in single sex halls.

A study that compared the moral development of students living in coeducational residence halls with students living in single sex halls supports the hypothesis that living in a co-educational residence hall seems to liberalize the values of male and female students towards sexual permissiveness.

A study by Reid (1974) revealed that "women who live in co-educational residence halls possess better relationship with men and other women, in addition, they have higher self-esteem and their conceptions of sex roles are based less on stereotypes. In a related study, Reid (1976) supported her earlier findings and added that women in a co-educational living environment had more egalitarian role expectations and their conceptions of gender roles were less stereotyped than women who lived in single sex halls. Women who live in co-educational residence halls seem to experience greater levels of psychosocial development than other women who live in a single sex hall.

Homogeneous Housing of Students Based on Academic Ability

Research in the area of homogeneous housing of students based on academic ability has been largely conducted to examine the impact of such housing on academic performance. Some of these studies have also investigated the impact of living in homogeneous housing based on academic ability with the satisfaction and attrition of high ability students. In these studies, high ability students were compared with students of average or low academic ability.

DeCoster (1966) compared two types of living arrangements for high ability students. In one, high ability students were housed with other high ability students, and, in the other, high ability students were assigned randomly. High ability students who

were housed with other high ability students had a significantly higher GPA than high ability students housed randomly. And, in a related study, DeCoster (1968) supported his earlier findings and added that these findings seem to be more true for women than for men.

Taylor and Hanson (1971) agreed with Decoster's findings. High ability freshman engineering students housed in a homogeneous environment performed better than predicted. In addition, when high ability engineering students were housed with average ability students, the average ability students improved their academic performance. Blimling and Hample (1979) conducted a two-year longitudinal study. In this study, students with various abilities requested to live on study floors with enforced quiet hours. These students were compared with students living on conventional floors. Students who chose to live on a study floor achieved modest increases in academic performance. Another notable finding on this topic is that high ability students seem to affect negatively the success of students with a "non-academic" orientation (DeCoster, 1966).

Homogeneous housing of high ability students in residence halls has been reported to have a relationship with the academic performance of these students. In addition, average ability students who are housed with high ability students tend to enhance their academic performance as well.

Homogeneous Assignment of Students by Academic Classification

Another way to group students in the residence halls is by academic classification. Administrators may choose to form all freshman halls, all upper-level (juniors and seniors) halls or may choose to assign students at random. The research in

this area has been mainly concentrated on freshman. Freshman students living with other freshman students were compared to freshman students living with upper-level students.

In a study that compared the grade point averages of freshman students living with other freshmen to other freshmen living at random in residence halls, Hebert (1966) reported significant results that support the argument that homogeneously assigned freshmen tend to achieve higher GPA's than their counterparts who are assigned at random.

Ballou (1986) studied the effect of homogeneous housing of freshman on academic performance and found that there were no significant differences between an all freshman residence hall and a freshman and upper-class residence hall. In another study, Washington (1969) reported similar results with a sample of freshmen women. He found no significant differences in academic achievement between freshmen women living in all freshmen hall and their counterparts living in a freshmen and upper-class hall.

Schoemer and McConnel (1970) found that freshmen women who resided in a homogeneous environment with other freshmen women did decrease significantly in their academic performance when compared with freshmen women who resided in heterogeneous environment based on academic classification.

The results are not conclusive as to the effect of homogeneous housing of students based on academic classification on academic performance. Some studies show a positive effect, while others show a negative effect and still others show no effect.

Washington (1969) found that freshmen women who resided in a homogeneous environment with other freshmen women were more significantly involved than their counterparts who lived in a heterogeneous environment based on academic classification. Mixed results were obtained by Schoemer and McConnel (1970). Freshmen women living in a homogeneous residence hall based on academic classification had a higher level of aspiration and their self-expression may have developed at a more rapid pace than their counterparts living in a freshman and upper class women's residence hall. However, these were the only two effects, nine other effects showed no significant differences between the two groups.

Inconclusive results were obtained as to the effect of homogeneous housing of freshman students on their involvement and satisfaction. One study found that homogeneously assigned freshmen women were significantly more involved than their freshman counterparts. Another study found negligible differences between homogeneously assigned freshman students and their counterparts who were assigned at random.

Homogeneous Assignment of Students by Academic Major

Another logical grouping of students is by assigning them according to their major of study. Students majoring in engineering, pre-medicine, pharmacy, and forestry were examples of such homogeneous housing. Engineering students in these studies were freshman and male. The studies compared homogeneously grouped students by academic major to other students who had similar majors but were assigned at random.

Elton and Bate (1966) examined the academic performance of male freshman students at the University of Kentucky, who had similar academic majors and were assigned to live together with male freshman students who were assigned to live

together but did not have similar academic majors. The assignments were done on a room by room basis so that a dyad would belong to the same college, for example, one student would be majoring in pharmacy and his roommate may be majoring in pre-medicine. Their connection would be the college of Arts and Science. Elton and Bate found that housing students according to similar academic majors did not influence the students' academic achievement during their first semester in college. Although their study involved only roommates, they concluded that reserving a floor for students enrolled in similar majors had "little justification".

In another study, Mckelfresh (1980) found similar results. He reported that the fact that engineering students were assigned to a floor did not significantly affect their academic performance when compared with engineering students assigned at random throughout a residence hall. These results were contradicted by two studies conducted at Auburn University. In one of these studies, engineering freshman students were used as subjects by Schroeder and Griffin (1977). They found that freshman engineering students who chose to live in an environment where other students had similar majors performed significantly better academically than other engineering students who were assigned randomly.

The second study involved pharmacy students. Schroeder and Belmonte (1979) investigated the influence of the residential environment on the academic achievement of homogeneously assigned female pharmacy students. They found that female freshman pharmacy students assigned to live in a homogeneous environment had significantly higher GPAs than their counterparts who were assigned randomly.

The results are not conclusive as to the effect of homogeneous housing of students based by academic major on academic performance. Some studies show a positive effect while others fail to show any effect.

Students assigned to a homogeneous environment based on academic major report more satisfaction than their counterparts who were assigned at random. Studies involving freshman male engineering students housed in a homogeneous environment based on academic major report higher levels of satisfaction than their counterparts who where housed in heterogeneous environments based on academic majors (Mckelfresh, 1980; Schroeder & Griffin 1979).

Similar results were obtained using forestry students as the subjects of the study (Madson, Kuder, Hartanov & Mckelfresh 1976). The results of this study indicated that forestry students housed in an environment with other forestry students are more satisfied than other forestry students assigned to live with students with different majors.

Schroeder and Belmonte (1979) discovered that freshman female pharmacy students engaged in more supportive relationships. The students also viewed their environment as slightly more involving than their counterparts who lived in heterogeneous living environments based on academic major.

Studies with different groups of homogeneously grouped students based on academic major indicate that these students are more satisfied with their experience than students who are heterogeneously assigned according to their academic major. Research seems to be lacking in the area of involvement of homogeneously assigned students based on academic major.

Freshman male engineering students were used in a study by Hanson and Taylor (1971). They compared freshman male engineering students housed in a homogeneous environment with their counterparts housed in a heterogeneous environment based on academic major. They found no significant differences in persistence between the two groups. These results were contradicted by Schroeder and

Griffin (1977). They found that freshman male engineering students who were assigned to live in a homogeneous environment based on academic major were more likely to persist in engineering than other freshman male engineering students who were assigned at random.

A study at Clarkson College involving freshman science students supported the results of Schroeder and Griffin (1977). Chapple (1984) reported that students majoring in science were more likely to remain in college after their first year if they were housed in closer proximity to other science majors than if they were assigned at random.

Persistence in college seems to be affected positively by whether students are housed homogeneously according to their academic major. Studies on the effect of homogeneously assigning students by academic majors on graduation rates seem to be lacking.

Summary

The impact of special interest groupings on students in residence halls has varied results. For example, female students living in co-ed residence halls have a higher drop out rate, are more socially active, and experience a greater level of psychosocial development than other female students living in a single sex hall. While there is no evidence that single sex halls improve the academic performance of men or women, both men and women residing in co-ed residence halls experience a liberalization of their values.

Housing of students based on academic ability is shown to enhance the academic performance of students of high academic ability. Studies that focused on students housed according to their academic classification resulted in inconclusive results. In addition, studies of academic performance were also inconclusive as to the

result of grouping students based on their academic major. However, housing students according to their major seems to affect persistence in college positively as well as satisfaction with the college experience.

Summary

Living in residence halls impacts students in many ways. The impact of living in residence halls has received much attention, specifically, the impact of residence hall living on the academic performance of students. These studies compared students living on-campus with students living off-campus. Positive outcomes were associated with living in the residence halls.

The different living environments in the residence halls also have an impact on students. The research in this area has addressed the impact of living in specialized or homogeneous living environments on academic performance. Past research, however, has not sought to determine the impact of living in a homogenous environment on the psychosocial development of students.

Based on this review, we can also conclude that living in a homogeneous environment has mixed impact on students on several dimensions. These dimensions include; academic performance, involvement and satisfaction, values and attitudes, student development, persistence and graduation, and general cognitive growth. The impact of living in a homogeneous environment was shown to affect men and women differently, noting that most of the research was conducted on freshman men.

CHAPTER III

METHOD AND DESIGN

Introduction

This study explores the impact of residence hall living on students. Student affairs practitioners have intentionally structured environments of residence halls. It appears that the social and psychological environments in a residential setting are different from those of commuter students. Even more specifically, there is an expected difference between residential living that is homogenous as compared to heterogeneous. This study attempts to explore the impact of a residential setting on various facets of student development. Particularly, it attempts to explore the relationship of homogenous living arrangements to several outcome variables. Comparisons will be made between engineering and honors students living in a homogeneous environment with other students living in heterogeneous environments.

Research Question and Hypotheses

The question examined in this study is: What is the relationship of homogenous housing and gender of engineering and honors students to selected measures of psychosocial development?

This study has three null hypotheses:

1. There will be no significant differences across groups of students living in different types of housing on the ten psychosocial dimensions as measured by scores of the Student Development Task and Lifestyle Inventory.
2. There will be no significant differences between women and men on the ten psychosocial dimensions as measured by scores of the Student Development Task and Lifestyle Inventory.
3. There is no significant interaction between gender and type of housing on dimensions of psychosocial development as measured by scores on the Student Development Task and Lifestyle Inventory.

Subjects

The sample for this study was 113 students who resided in residence halls and were either on a special interest housing floor or on a traditional floor at a medium-sized land grant university in the Southwest. In this residence hall system, students have the option to reside on a traditional floor or on a special interest housing floor. Students who live on the special interest floors do so by choice. Two types of special interest housing existed on this campus, honors housing and engineering. The students living on the honors floors are required to participate in the university honors program, and the students living on the engineering floor must major in one of the engineering programs.

The gender make-up of the sample consisted of 57 (50.4%) males; and 56 (49.6%) females. Students reported an average age of nineteen years and five months, and most of the students (85.8%) reported their age to be 20 years or younger. The ages of the students ranged from 18 to 24 years old. The ethnic backgrounds reported by students were: Hispanic or Mexican American, 2 (1.8%); Asian or Pacific Islander, 3 (2.7%); Native American, 9 (8.1%); White or Caucasian, 96 (86.4%); Other or did not respond, 3 (2.7%); for a total number of participants of 113. All sample participants

reported that they were single. The sample included undergraduate students from all grade classifications: freshmen, 55 (49.5%); sophomores, 31 (27.9%); juniors, 19 (17.1%); seniors, 6 (5.4%); and fifth year seniors; 2 (1.8%).

Six undergraduate colleges were represented in this sample: Engineering, 47 (42.3%); Arts and Sciences, 34 (30.6%); Business Administration, 19 (17.1%); Agriculture, 6 (5.4%); Human Environmental Sciences, 4 (3.6%); and, Education, 3 (2.7%).

Instrumentation

Data on the subjects were obtained from two instruments: The Student Development Task and Lifestyle Inventory (Winston & Miller, 1987) and a demographic questionnaire developed by the author (see Appendix A).

The Student Developmental Task and Lifestyle Inventory (SDTLI)

The Student Developmental Task and Lifestyle Inventory is one of the major instruments used to measure the constructs of student development. The authors of the instrument Miller and Winston (1987) grounded their work in the theory of student development articulated by Arthur Chickering (1969). The premise is that the successful completion of tasks leads toward continued progress in the students' development. The SDTLI was designed for use with traditional-aged university students.

The SDTLI consists of three developmental tasks, and three scales. Two of the developmental tasks also include subtasks. An individual acquires the experimental base needed to accomplish developmental tasks that arise in the future by successful accomplishing or achieving one of the developmental tasks. If the person fails to successfully complete or accomplish a task or subtask, they may be faced with social

disapproval and may be hindering further growth in that area of development. A subtask is a more specific component, or part, of a developmental task.

The developmental tasks measured by the SDTLI are Establishing and Clarifying Purpose Task (PUR); with subtasks of Educational Involvement (EI), Career Planning (CP), Lifestyle Planning (LP), Life Management (LM), and Cultural Participation (CUP). Developing Mature Interpersonal Relationships Task (MIR); with subtasks of Peer Relationships (PR), Tolerance (TOL), and Emotional Autonomy (EA). Academic Autonomy (AA) is the third task and does not contain any subtasks. The scale scores of the SDTLI are the Salubrious Lifestyle Scale (SL), the Intimacy Scale (INT), and the Response Bias Scale (RB). Descriptions of each of the developmental tasks, subtasks, and scales of the SDTLI follow.

Establishing and Clarifying Purpose Task (PUR)

Scoring high on this task means that the students: have well-defined educational goals, have thoroughly explored their educational goals and plans, and are described as active and self-directed learners (Winston & Miller, 1987). In addition, they have appropriate career plans and have established an emotional commitment to their career goal and are taking appropriate steps towards realizing these goals. These students have taken into consideration "personal, ethical, and religious values, future family plans, and vocational and educational objectives" (p. 8) in constructing their future plans. These students usually have a wide range of cultural interests and participate in various cultural events. The students are also characterized by the ability to meet their daily needs, personal responsibilities, academic responsibilities, and to manage their personal finances.

Educational Involvement Subtask (EI). Students who score high on this subtask have carefully analyzed their interests and investigated educational options.

Career Planning Subtask (CP). Students who score high on this subtask have synthesized information about their interests, values, abilities, and about the world of work.

Lifestyle Planning Subtask (LP). Students who score high on this subtask have established personal direction and orientation that includes the following area; personal, ethical, and religious values, future family plans, and vocational and educational objectives.

Life Management Subtask (LM). Completing this task involves the ability to structure one's life and to manipulate the environment in order to satisfy one's daily needs and to fulfill responsibilities without comprehensive support and direction from others.

Cultural Participation Subtask (CUP). Accomplishing this subtask is characterized by developing interest in cultural activities such as attending plays, visiting museums, and attending art exhibits and classical music concerts.

Developing Mature Interpersonal Relationships Task (MIR)

Students who score high on this task do not need frequent encouragement and approval from others. Their dependence on parental direction in decision making is kept to a minimum. The reduced pressure to conform to group norms also characterizes accomplishing this task.

Peer Relationships Subtask (PR). Accomplishing this subtask involves the development of relationships that are based on trust, independence, and frankness.

Tolerance Subtask (TOL). Achieving this subtask involves demonstrating respect and acceptance of those from different backgrounds. The differences may be in the areas of belief, culture, race, lifestyle, and appearance.

Emotional Autonomy Subtask (EA). Achieving this developmental subtask is characterized by the freedom from the need for reassurance and approval of peers.

Students trust their feelings, are self-assured, confident, decision makers, and are able to be the dissenting voice in groups.

Academic Autonomy Task (AA)

Achieving this task is demonstrated in the students comfort with their academic abilities. Students who score high on this developmental task are able to control their behaviors in order to put into action their educational plans. Their academic performance is consistent with their abilities.

Salubrious Lifestyle (SL). Students who score high on this scale regularly eat well-balanced and nutritious meals. They also maintain an appropriate body weight, plan for and get sufficient sleep and exercise. In addition, they practice healthy stress reduction technique, and have a positive evaluation of their physical appearance.

Intimacy Scale (INT)

This scale demonstrates that students have established a relationship with another person. For the purposes of this study, we did not use the intimacy scale.

Response Bias Scale (RB)

The scores on the response bias scale indicate whether the student is attempting to display an unrealistic self-image. For the purposes of this study, we did not use the RB scale.

Reliability and Validity of SDTLI

Reliability and validity of the SDTLI are well-established. Reliability was measured using test-retest and internal consistency procedures. Reliability of the instrument is sufficient to justify acceptance of the consistency of this instrument's results. The validity of SDTLI was measured by construct and concurrent validity. The

construct validity for the instrument was given initial support with reports of the factor analyses conducted to develop the test (Burrows, 1994). Evidence supporting construct validity indicates that the SDTLI shows appropriate correlation with several instruments. Reviews in *Burrow Yearbook of Mental Measurements* conclude that "the SDTLI is a psychometrically sound inventory that can prove useful in program development and has potential research applications" (p.881). Reliability was estimated for the SDTLI by test-retest comparisons and measures of internal consistency.

Test-Retest Reliability To measure test-retest reliability the SDTLI was administered to two groups of undergraduate university students. One of the groups consisted of students enrolled in an introductory education class (n = 27) at a large, public, southeastern university, and the other group (n = 42) was comprised of students enrolled in an introductory psychology class at a small, public college in the southeast. The students enrolled in the education class completed the SDTLI a second time four weeks after the first administration. However, the students enrolled in the psychology class completed the SDTLI for the second time two weeks after the first administration.

After correlating the results from these test-retest administrations, the investigators reported that the correlation clustered around .80. The high score for the first group was .88 and the low score was .70. For the second group, the high score was .89 and the low score was .74. Miller and Winston (1987) interpreted these results to indicate that the SDTLI has relatively high temporal stability, "Results would not be expected to vary greatly over short periods of time for individuals completing the inventory and is quite adequate for group data" (p.23).

Internal Consistency Reliability estimations of internal consistency were provided by coefficient alpha, inter-item and item-total correlations procedures. The researchers

administered the SDTLI to a large group (n=1200) of students who were enrolled at 22 Colleges and Universities in the United States and Canada. The alpha coefficients ranged from .90 for the Clarifying Purpose Task to .50 for the Response Bias scale. When the researchers omitted the Response Bias questions from their calculations, the overall coefficient alpha (n=954) for the SDTLI was .93.

Hennings-Stout (1990) in the Supplement to the *Ninth Mental Measurements Yearbook* wrote that the reliability of the SDTLI, as measured by both the test-retest and internal consistency, is sufficient to "warrant acceptance of the consistency of this inventory's results" (p. 247).

Validity of the SDTLI The items of the SDTLI were grouped based on factor analysis techniques in order to estimate the validity of the SDTLI. Winston and Miller (1987) examined the intercorrelation for the SDTLI's tasks, subtasks, and scales. This examination indicated that each of the subtasks are most highly correlated with the task to which they are assigned than to any other task. The developmental tasks of Clarifying Purpose and Developing Mature Interpersonal Relationships were found to be relatively independent of one another, while the Academic Autonomy task was found to have a relatively high correlation with both of these two tasks. Validity estimates for each of the subtask can be found in the SDTLI manual (Winston & Miller, 1987).

Demographic Questionnaire

This questionnaire (see Appendix A) was developed by the author to supplement the demographic information contained in the SDTLI. The questions contained in the demographic questionnaire served to identify the students' place of residence and, hence, the group to which they belonged, their length of residence, extracurricular activities, cumulative GPA, and the students' major of study.

Research Design

This study utilized a (2X3) multivariate factorial design. A two-way, multivariate analysis of variance (MANOVA) was performed on the data. MANOVA was selected for two reasons. First, MANOVA is specifically designed to be used with multiple dependent variables. Second, MANOVA was selected over a series of ANOVAs because of the protection it affords against type I errors (Stevens, 1992). The factors in this design were the type of housing arrangement (honors, engineering, and heterogeneous) and gender (male, female). The causal comparative method is chosen because the independent variables could not be manipulated. This method determines if a relationship exists between the independent variables (type of housing and gender) and the dependent variables (the ten SDTLI scales). This method also determines the degree of relationship that exists between the independent and dependent variables (Gay, 1996).

Procedures

Permission to use subjects from residence halls was obtained from the Institutional Review Board (see Appendix B) and the director of Residential Life (see Appendix C). A letter was sent to all subjects informing them of the study and inviting them to participate. Subjects were required to sign an informed consent form before data collection and subjects were informed that they could obtain a summary of the results of the study. All subjects were given a packet containing a demographic questionnaire, and the Student Development Task Inventory. Confidentiality on all measures was protected. The subjects did not identify themselves on the questionnaire or on the Student Development Task Inventory. The signed consent forms, questionnaires, and the inventories were locked in an office area.

After distributing the packets, the investigator of the current study instructed the subjects to read the instructions on each instrument and to answer each item as honestly and completely as possible. Subjects were allowed as much time as they require to complete the instruments. The investigator was present in the room to respond to any questions.

Data Analysis

A two-way, multivariate analysis of variance (MANOVA) was performed on the data. MANOVA was selected for two reasons. First, MANOVA is specifically designed to be used with multiple dependent variables. Second, MANOVA was selected over a series of ANOVAs because of the protection it affords against type I errors (Stevens, 1992). The Alpha value set at .05. In order to describe major differences among groups in MANOVA, post hoc discriminant analysis was used. Discriminant analysis allows researchers to find group differences by identifying discriminant functions (Stevens, 1992). Type of residence hall floor (honors, engineering, and heterogeneous) and gender were the independent variables. The dependent variables (the ten SDTLI scales) were tested for significance on type of residence hall floor and gender.

Summary

This study was designed to compare the psychosocial development of students housed homogeneously (honors and engineering) with student housed heterogeneously. Research in this area is lacking, and it is important to understand the usefulness and impact of socially grouping students. In addition, this study provides information with regard to the impact of grouping male and female students in homogeneous and heterogeneous environments.

CHAPTER IV

RESULTS

The general purpose of this study was to examine the relationship of special interest housing to the psychosocial development of college students living on campus. The study was designed to provide an examination of the potential differences between undergraduate student groups living on engineering, honors, and heterogeneous floors for both males and females. The purpose of this chapter is to present the results of the general statistical analyses of the data which were collected for this study. Specifically, the results related to the research questions, along with a summary of the post omnibus statistical procedures are presented.

Research Hypotheses

This study examined the effect of two independent variables (housing type and gender) on ten dependent variables (the psychosocial development tasks of college students) as measured by the SDTLI. This study included three null hypotheses:

1. There will be no significant differences across groups of students living in different types of housing on the ten psychosocial dimensions as measured by scores of the Student Development Task and Lifestyle Inventory.
2. There will be no significant differences between women and men on the ten psychosocial dimensions as measured by scores of the Student Development Task and Lifestyle Inventory.

3. There is no significant interaction between gender and type of housing on dimensions of psychosocial development as measured by scores on the Student Development Task and Lifestyle Inventory.

In order to address the above hypotheses, the data were initially analyzed using a multivariate analysis of variance. A 2x3 between subjects multivariate analysis of variance was performed on the ten dependent variables. The means and standard deviations for this design are presented in Table 1. The results of the MANOVA utilizing Wilks' criterion (see Table 2) indicated that the main effects of gender and housing type were statistically significant. However, as can be seen in the table, the interaction of gender x housing type was not statistically significant. Thus, the first two null hpotheses were rejected. The third null hypothesis was not rejected.

Table 1

Means and Standard Deviations

		Male			Female			Total		
		Engineer	Honors	Homo-geneous	Engineer	Honors	Homo-geneous	Engineer	Honors	Homo-geneous
SDTLI Variables										
AA	M	6.22	6.23	4.46	6.00	6.41	5.61	6.12	6.33	4.59
AA	S	2.26	2.35	2.71	2.78	2.32	3.09	2.47	2.29	2.87
CP	M	9.67	9.08	9.29	9.00	10.06	8.74	9.36	9.63	9.03
CP	S	4.51	4.44	4.70	4.31	5.41	4.75	4.36	4.96	4.68
CUP	M	2.72	3.92	3.04	3.27	3.94	2.81	2.97	3.93	2.93
CUP	S	1.27	1.61	1.46	1.16	1.14	1.33	1.24	1.34	1.39
EA	M	4.56	5.38	4.75	4.80	5.18	4.23	4.67	5.27	4.50
EA	S	1.92	2.14	1.89	1.82	1.74	1.95	1.85	1.89	1.92
EI	M	9.56	10.92	8.75	10.20	11.76	9.77	9.85	11.40	9.70
EI	S	2.75	2.46	3.31	3.14	3.17	3.74	2.91	2.87	3.52
LM	M	9.50	9.46	9.00	10.33	11.06	9.91	9.88	10.37	9.43
LM	S	3.13	2.73	3.58	2.09	2.61	3.38	2.70	2.74	3.47
LP	M	6.33	7.15	6.08	6.80	7.41	6.22	6.55	7.30	6.15
LP	S	1.37	2.26	2.86	2.34	1.8	2.47	1.86	1.99	2.65
PR	M	7.94	8.38	8.33	9.13	8.71	8.09	8.48	8.57	8.22
PR	S	2.55	2.47	2.78	1.73	2.34	3.02	2.27	2.36	2.87
SL	M	4.50	4.84	5.17	4.2	5.12	3.91	4.36	5.00	4.57
SL	S	1.92	2.04	2.30	2.04	2.12	1.51	1.95	2.05	2.04
TOL	M	4.72	6.85	4.67	6.67	6.94	6.27	5.61	6.90	5.43
TOL	S	2.24	1.99	1.97	1.54	1.78	1.88	2.16	1.84	2.07

The variables presented in Table 1 represent the tasks and scales of the SDTLI:

AA : Academic Autonomy; CP: Career Planning; CUP: Cultural Participation; EA: Emotional Autonomy; EI: Educational Involvement; LM: Life Management; LP: Lifestyle Planning; PR: Peer Relationships; SL: Salubrious Lifestyle; TOL: Tolerance

Table 2

Overall Manova Summary Table

Source	Wilk's Lambda	F	df	Sig. of F
Gender	.794	2.43	10	0.013*
Housing Type	.688	1.93	20	0.012*
Gender x Housing Type	.857	.751	20	0.768

*P < .05

Post Omnibus Analyses for Housing Type

In the absence of a statistically significant interaction, interest shifted to analysis of the main effects. Post omnibus analyses for the housing type variable were performed and reported first as follows: a descriptive discriminant analysis, univariate F tests, and, finally, multiple comparison tests for the four dependent variables. Following the finding that the housing type main effect was statistically significant, a discriminant analysis was performed with the ten SDTLI scales serving as the discriminating variables and housing type with three levels (honors, engineering, and heterogeneous) serving as the group variable. The two possible discriminant functions were derived and tested for statistical significance. Only the first discriminant function was found to be statistically significant (see Table 3)

In order to facilitate understanding the nature of the discriminant function, Table 3 was constructed. The ten SDTLI scores were treated as the discriminating variables. The classification variable was housing type which has three levels: engineering, honors,

Table 3

Three Group Discriminant Analysis of Variables

	Discriminant Analysis		Analysis of Variance	
Variables	Standardized Discriminant Function Coefficients	Structure Coefficients	F	P
AA	.47	.44	5.3	.007*
CP	-.65	.09	.16	.851
CUP	.33	.56	5.95	.004*
EA	.05	.30	1.55	.216
EI	.67	.49	4.27	.016*
LM	-.34	.21	.85	.431
LP	-.37	.37	2.35	.099
PR	-.37	.09	.20	.821
SL	.07	.17	.81	.445
TOL	.52	.53	5.13	.008*

Canonical Discriminant Function 1:

Eigenvalue = .33

Canonical Correlation = .50

Wilk's Lambda = .69

Chi Square (20df) = 37.13

*p<.05

and heterogeneous. The standardized canonical discriminant function coefficients and the structure coefficients for function one along with the univariate F-ratios and the significance levels of the ten variables are shown in Table 3.

The loadings on the structure matrix indicate that TOL (Tolerance), CUP (Cultural Participation), AA (Academic Autonomy) and EI (Educational Involvement) seemed to define the observed significant discriminant function. Similarly, the univariate F-ratios for these four variables were found to be statistically significant. Examining the group centroids for the discriminant function (see Table 4) indicates that students living on honors floors are higher on the functions of Tolerance, Cultural Participation, Academic Autonomy, and Educational Involvement than students living on engineering and heterogeneous floors. In addition, data in Table 5 show the means for honors, engineering, and heterogeneous students on the Academic Autonomy, Cultural Participation, Educational Involvement, and Tolerance variables.

Table 4

Canonical Discriminant Function Evaluation

Group	Function 1 Centroids (group means)
Engineering	-.11
Honors	.88
Heterogeneous	-.50

Table 5

Total Means and Standard Deviations for the 4 Variables

	Engineering		Honors		Heterogeneous	
	M	S	M	S	M	S
AA	6.12	2.47	6.33	2.29	4.59	2.87
CUP	2.97	1.24	3.93	1.34	2.93	1.39
EI	9.85	2.91	11.40	2.87	9.70	3.52
TOL	5.61	2.16	6.90	1.84	5.43	2.07

Table 6

Post Hoc Tests – Tukey Multiple Comparisons of Mean Differences

	X_1-X_2 Engineering vs. Honors	X_1-X_3 Engineering vs. Heterogeneous	X_2-X_3 Honors vs. Heterogeneous
TOL	-1.2939*	.1713	1.4652*
CUP	-.9636*	.03491	.9986*
AA	-.2121	1.5343*	1.7464*
EI	-1.5515	.6094	2.1609*

* probability < .05

Given the significant univariate comparisons on four of the dependant variables, Tukey's post hoc comparisons test for all three possible pairwise comparisons were performed. Table 6 summarizes the results of these analyses. On the Tolerance and Cultural Participation variables, it can be seen that the honors students are significantly different from engineering and heterogeneous students, but engineering and heterogeneous students are not significantly different from each other on the Tolerance and Cultural Participation variables. On the Academic Autonomy variable, it can be seen that honors and engineering students are significantly different from heterogeneous

students, but engineering and honors students are not significantly different on the Academic Autonomy variable. As for the Educational Involvement variable, the honors students are significantly different than the heterogeneous students. The engineering students however, were not significantly different than the honors students on the Educational Involvement variable. In addition, the engineering students were not significantly different than the heterogeneous students on the same variable.

Gender Discriminant Function Analysis

Following the finding that the gender main effect was also statistically significant, a discriminant analysis was performed with the ten SDTLI scales serving as the discriminating variables and gender serving as the group variable. The significance test reported in Table 7 reveals that the single discriminating function is statistically significant; however, attention here focuses on the nature of the discriminant function.

In order to facilitate understanding the nature of the discriminant function, Table 7 was constructed. The ten SDTLI scores were treated as the discriminating variables. The classification variable was gender. The standardized canonical discriminant function coefficients and the structure coefficients for function one along with the univariate F-ratios and the significance levels of the ten variables are shown in this table.

The single discriminant function was derived and tested for significance. Function one was found to be statistically significant (Wilks' lambda = .77, $p < .01$). The loadings on the structure matrix indicated that TOL (Tolerance) seemed to define the observed significant discriminant function. An examination of the group means (centroids) of the discriminant function (see Table 8) indicates that women are more tolerant than men. Table 1 summarizes the means for both males and females for all variables including the Tolerance variable. The mean for women is 6.59 while the mean for men is 5.20 (see appendix D, Table J)

Table 7

Two Group Discriminant Analysis of Variables

	Discriminant Analysis		Analysis of Variance	
Variables	Standardized Discriminant Function Coefficients	Structure Coefficients	F	P
AA	-.16	.05	.09	.76
CP	-.63	.03	.03	.87
CUP	.19	.10	.32	.57
EA	.57	-.07	.17	.68
EI	.38	.28	2.54	.11
LM	.59	.34	3.72	.06
LP	.37	.14	.60	.44
PR	-.00	.13	.53	.47
SL	-.29	-.23	1.71	.19
TOL	.84	.64	13.09	.0005*

Canonical Discriminant Function 1:

Eigenvalue = .30

Canonical Correlation = .48

Wilk's Lambda = .77

Chi Square (10df) = 26.75

*p<.05

Table 8

Canonical Discriminant Function Evaluation

Group	Function 1 Centroids (group means)
Male	-.54
Female	.55

Summary

Presented in this chapter were the results of this study, which included the statistical analyses and interpretation of these analyses. A multivariate analysis of variance was utilized as well as post omnibus discriminant function analysis for each of the main effects.

The multivariate analysis of variance produced statistically significant results for the two main effects gender and housing type, but the interaction of the two main effects was not statistically significant. Following the findings that gender and housing type were statistically significant, post omnibus discriminant analyses were performed.

The discriminant analysis with the ten SDTLI scales serving as the discriminating variables and housing type as the group variable produced two discriminant functions. One discriminant function was statistically significant with Tolerance, Cultural Participation, Educational Involvement, Academic Autonomy variables contributing most to the observed significance. Following the discriminant analysis procedure, ten analysis of variance procedures were performed. The ANOVA results coincided with the

discriminant analysis results which indicate that the four identified variables are minimally contributing to the difference.

A third level of analysis was performed using pairwise comparisons for the four identified variables and the three housing types. The univariate means for the three housing groups were different and their results were summarized.

Another discriminant analysis with the ten SDTLI scales serving as the discriminating variable and gender as the group variable produced one discriminant function. This discriminant function was statistically significant with Tolerance variables defining the observed significance. Further examination of the group means indicated that women are more tolerant than men.

Chapter V

SUMMARY, DISCUSSION AND RECOMMENDATIONS

Summary

The purpose of this study was to examine the relationship of special interest housing to the psychosocial development of college students living on-campus. The study examined the differences between undergraduate student groups living on engineering, honors, and heterogeneous floors for both males and females. To consider these differences, this study focused on the possible relationships between living in a particular environment and the students' psychosocial development. The purpose of this chapter is to present a discussion of the results. Specifically, the conclusions related to the research questions along with recommendations for future research and practice.

This study assumes that students living in special interest housing such as engineering and honors floors are different in the areas of psychosocial development from the students who live in heterogeneous living environments on campus. To consider these differences, this study focused on the possible relationships between living in a particular environment and the students' psychosocial development.

Students enter college with individual variability in personal characteristics, academic credentials, and psychosocial development. Each individual's characteristics are a unique combination of academic interests, developmental maturity, academic ability, and personal characteristics. Most students as they enter college are required to live in residence halls, some of these students choose to live in special environments

that are structured based on certain criteria. These living environments are usually structured to compliment the academic mission of the University. This study focused on three such environments; honors, engineering, and traditional housing options in a residence hall system.

The sample for this study was 113 students who resided in residence halls and were either on a special interest housing floor or on a traditional floor. Two types of special interest housing existed on this campus, honors housing and engineering. The students living on the honors floors are required to participate in the university honors program, and the students living on the engineering floor must major in one of the engineering programs. The gender composition of the sample consisted of 57 (50.4%) males and 56 (49.6%) females. Students reported an average age of nineteen years and five months, and most of the students (85.8%) reported their age to be 20 years or younger. The ages of the students ranged from 18 to 24 years old. The ethnic backgrounds reported by students were: Hispanic or Mexican American, 2 (1.8%); Asian or Pacific Islander, 3 (2.7%); Native American, 9 (8.1%); White or Caucasian, 96 (86.4%); and Other or did not respond, 3 (2.7%), for a total number of participants of 113. All sample participants reported that they were single. The sample included undergraduate students from all grade classifications: freshmen, 55 (49.5%); sophomores, 31 (27.9%); juniors, 19 (17.1%), seniors, 6 (5.4%); and, fifth year seniors; 2 (1.8%).

The research questions addressed in this study were:

1. There will be no significant differences across groups of students living in different types of housing on the ten psychosocial dimensions as measured by scores of the Student Development Task and Lifestyle Inventory.

2. There will be no significant differences between women and men on the ten psychosocial dimensions as measured by scores of the Student Development Task and Lifestyle Inventory.
3. There is no significant interaction between gender and housing environment on levels of psychosocial development as measured by scores on the Student Development Task and Lifestyle Inventory.

Discussion

The first hypothesis of this study stated that there would be no significant differences across groups of students living in different types of housing on the ten psychosocial dimensions as measured by scores of the Student Development Task and Lifestyle Inventory. The results of the multivariate analysis of variance indicated that there were significant statistical differences in psychosocial development across the three groups of students studied; honors, engineering, and heterogeneous. The observed differences were defined by four variables: Tolerance, Cultural Participation, Academic Autonomy, and Educational Involvement.

The group centroids for the discriminant function indicated that honors students' scores significantly differed on the variables of Tolerance, Cultural Participation, Academic Autonomy, and Educational Involvement from the scores of students living on engineering floors. Furthermore, students living on engineering floors scored higher on the same variables than students living on heterogeneous floors.

Further analysis utilizing Tukey's post hoc comparisons test for all three pairwise comparisons resulted in the following: Honors students scored significantly different from engineering and heterogeneous students on the Tolerance and Cultural Participation variables. Significant differences in the Tolerance variable suggest that honors students

have a significantly higher level of acceptance of people of different backgrounds, cultures, lifestyles, and beliefs than the engineering and heterogeneous students. Similarly, the honors student group achieved a significantly higher level on the Cultural Participation subtask than engineering and heterogeneous students which implies that honors students are more likely to be active in a wide variety of cultural events such as art exhibits, theatrical plays, musical concerts, and visits to museums (Miller & Winston, 1987). Honors students are more likely to spend their leisure time in such activities as reading, pursuit of hobbies, and volunteering compared to engineering and heterogeneous students who seem to spend less of their leisure time on culturally rich activities. A possible explanation for the above differences could be that this sample of honors students had different pre-college experiences or exposure to a wider variety of cultural interests. Perhaps, honors programs attract students with broader cultural interests and experiences. These honors students seem to have an above average interest in subjects and experiences that expose them to diverse ideas and cultures.

The third conclusion from the pairwise comparison for the Tolerance and Cultural Participation variables indicates that engineering students are not significantly different from heterogeneous students. This conclusion is consistent with the argument that the engineering and heterogeneous student groups may have not expanded their cultural horizons to the extent that honors students have.

On the Academic Autonomy variable, the engineering and honors students' scores on the SDTLI differed significantly from the heterogeneous students scores. According to Miller and Winston (1987), students with high scores on this variable plan and implement effective study plans and schedules. This author agrees with Miller and Winston because honors and engineering students seem to be more self-disciplined and/or focused and, therefore, may not require as much direction and/or support as do heterogeneous students. The academic requirements of the engineering and honors

programs may be more demanding than other programs and perhaps require enhanced skills in the area of Academic Autonomy. The personal characteristics associated with high levels of performance are essential for maintaining the students' academic standing in the honors program and the college of engineering. Tukey's pairwise comparison also indicated that there were no significant differences on the Academic Autonomy variable between engineering and honors students. Honors and engineering students seem to have developed the capacity to deal well with ambiguity and to control their behavior in order to achieve their goals and responsibilities (Miller & Winston 1987).

Honors students scored significantly higher than heterogeneous students on the Educational Involvement variable. The most appropriate descriptions for the Educational Involvement variable offered by Winston and Miller (1987) characterizes students who achieved higher scores on this subtask as students who are involved in their education, initiate personal study projects, attend non-required programs and lectures, and have regular contact with their academic advisor and professors. One possible explanation for the higher score on Educational Involvement for the honors students in the study is that honors students often have to complete additional projects beyond those that are required by ordinary courses of study. Another explanation revolves around the independent nature of the honors program and the expectation that for a student to succeed they must be self-motivated and seek academic opportunities that are beyond the traditional requirements of academic courses and programs.

Engineering students were not significantly different from either the honors or heterogeneous students on the Educational Involvement variable. It seems that engineering and heterogeneous students are not as involved in the academic life of the university as their honors counterparts. According to the definition of this variable offered by Miller and Winston (1987), it seems that engineering and heterogeneous students are more passive learners and do not initiate personal study projects or attend

non-required lectures and programs. One possible explanation for the results of the current study is that the engineering program is very rigorous and time consuming, and, therefore, the students may find little time to be involved in additional projects. The structure of the engineering program is such that it does not allow for the initiation of personal study projects. One possible explanation for the heterogeneous students' non-significant results when compared to engineering students may be attributed to lower commitment to the educational experiences or lack of clearly defined educational goals. Another explanation is that heterogeneous students are not motivated to initiate personal study projects and do not attend non-required lectures because they choose to spend their time in other extracurricular activities.

The second hypothesis stated that there will be no significant differences between women and men on the ten psychosocial as dimensions measured by scores of the Student Development Task and Lifestyle Inventory. The results of the multiple analysis of variance indicated that there were significant statistical differences in psychosocial development across gender. The statistical analyses that were performed indicated that women were significantly different than men on a single variable, the Tolerance variable. Employing Miller and Winston's (1987) definition of the Tolerance variable for this study, women are more open and accepting of differences in others than the men in this study. Women in this study would not shy from or reject contact with those people with different, ethnic, religious beliefs, lifestyles or political views. These findings are consistent with Carol Gilligan's (1977) theory of female development. Gilligan (1977) presents that female moral reasoning is based on a different perspective than the male moral reasoning. Female moral judgement stresses care and sensitivity to the needs of others and developing responsible relationships, all characteristics consistent with Tolerance.

The third hypothesis of this study stated that there would be no significant interaction between gender and housing type on levels of psychosocial development as measured by scores on the Student Development Task and Lifestyle Inventory. Since the multivariate analysis of variance did not yield significant differences, this hypothesis was not rejected.

The past decade has seen the emergence of many special interest housing options in university residence halls. University administrators are creating even more living options for their students. Perhaps the intentional grouping of students does enhance certain qualities. The results of this study indicate that engineering students were more tolerant than heterogeneous students and honors students were even more tolerant than the engineering students.

It seems that honors students have the appropriate variance in the type of experiences they encounter to enhance their psychosocial development. The engineering and heterogeneous students, on the other hand, may have either too wide or too narrow ranges of experiences to impact their psychosocial development. Therefore, the engineering and heterogeneous students could benefit from exposure to people and activities that will provide them with experiences that enhance their psychosocial development.

It also seems that women have experiences within the context of their environment that contributes to a more nurturing and tolerant perspective. Therefore, male residence hall students may benefit from involvement in activities that provide the opportunities to expand the nurturing aspects of their personality.

The statistical analyses that were performed on the first and second hypotheses resulted in one common variable that was significant in both hypotheses; the Tolerance variable. The sample of this study was comprised of a predominantly white population, 86.4% of the participants reported their cultural background as White or Caucasian.

Tolerance of others from different backgrounds is an issue that needs to be addressed by administrators when the mix of the population in the university is predominantly white. Administrators may want to consider programs that would increase the numbers of diverse students in residence halls. Enhanced psychosocial development of students is one of the outcomes that is associated with the college experience and by varying the mix of the populations that reside in residence halls, administrators are enriching the quality of students' diverse experiences.

Limitations

This study investigated only the impact of special interest housing on student development. Obviously, there are many factors that affect student growth and development in college, such as extra curricular activities, relationships with professors and mentors, and social or professional organizations. The students who participated in this study were volunteers, and, ideally, a random sample would have been preferred by the author.

Recommendations for Research

1. More research is needed on the influence of other residence hall arrangements. Special interest housing, now called affinity housing, is on the rise throughout the nation. Students have many options that include, cultural and language based housing; such as Latino, Russian, or Native American housing options. Other housing options deal with health and wellness. Many universities are offering smoke-free and substance-free housing or grouping students based on their extracurricular interests such as biking. These arrangements will surely have an impact on students. Is it the desired impact?

2. More research is needed on the impact of special interest housing assignments on students from different ethnic backgrounds who live on a predominantly white campus. The common variable that was identified in both hypotheses was tolerance and the different tolerance levels on the part of male students and students housed in engineering and heterogeneous housing arrangements.
3. Additional research should be conducted on the impact of special interest housing in a co-educational setting (men and women living on the same floor).
4. Additional research is also needed on the long-term effects of residing in a special interest housing environment. By gathering data on students before assigning them to special interest environments and by testing them after their experience, more light can be shed on the relationships of special interest housing to the different outcomes of student development.
5. Longitudinal studies of the impact of special interest housing on the retention of students would be beneficial to university administrators and program planners.
6. Studies that will take into account the pre-college differences of students residing in special interest housing would be beneficial in determining the impact of special interest housing.
7. Student satisfaction with homogeneous living environments may not be a viable outcome assessment criterion. Students may be satisfied with what is comfortable, but the environment may not provide the appropriate balance of challenge and support (Sanford, 1966). Further investigation of appropriate outcome assessment criterion is suggested.
8. With the increase in the types and number of special interest housing across the nation, it would be beneficial for student affairs administrators and theorists to develop a plan that will periodically examine and evaluate the specific environments.

Recommendation for Practice

1. Encourage students living in heterogeneous housing assignments to attend non-required lectures and programs. Residence hall staff may develop an interesting marketing plan that will ensure that students are consistently aware of lectures and programs offered on campus.
2. Encourage students living in heterogeneous housing to interact with their faculty by implementing intentional programs that reward both faculty and students for these activities.
3. Increase the awareness and understanding of engineering and heterogeneous students of people who are different than themselves by implementing programs that will focus on this outcome.
4. Provide and encourage the participation of male students in cultural activities that will expose students to people who are different than themselves. Employ a residence hall staff who can act as role models who value students of different cultural backgrounds, and who, themselves, may be culturally diverse.
5. Encourage engineering and heterogeneous students to attend musicals, theatrical plays, and attend museums in order to widen their cultural horizons. The programs in the residence halls can facilitate the attendance of students at cultural events by providing discount tickets or facilitating the transportation to and from these events.
6. Heterogeneous students need help to plan and implement effective study plans and schedules. Resident Assistants on heterogeneous floors could be made aware of the special needs of their students and administrators with the help of faculty can devise programs or plans to assist students in developing effective study plans and schedules.

Summary

The purpose of this study was to examine the relationship of special interest housing to the psychosocial development of college students living on campus. The study examined the differences between undergraduate student groups living on engineering, honors, and heterogeneous floors for both males and females. The author found that psychosocial differences do exist for students living in special interest housing, specifically, that special interest housing impacts student groups differently based on the housing type and gender. Based on the results obtained in this study we could conclude that there is support for the notion that living in special interest floors in residence halls has some impact on the psychosocial development of student groups.

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APPENDIX A

DEMOGRAPHIC QUESTIONNAIRE

DEMOGRAPHIC QUESTIONNNAIRE

Please supply the following information:

Age: _____

Gender: Male _____ Female _____

Ethnicity: European American _____ African American _____
Native American _____ Hispanic _____
International _____ Other _____
I prefer not to answer this question _____

Classification: Freshman _____ Sophomore _____ Junior _____

Senior _____ Graduate _____

College Major: _____

Cumulative GPA as of Fall 1994 grades:_____

Residence Hall: _____ Floor: _____

High School GPA: _____ ACT Score: _____

Total Number of High School Graduating Class: _____

List of extracurricular activities in high school:

_____
_____
_____
_____

List of extracurricular activities in college:

_____
_____
_____
_____

APPENDIX B

INSTITUTIONAL REVIEW BOARD
HUMAN SUBJECTS REVIEW APPROVAL FORM

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
HUMAN SUBJECTS REVIEW

Date: 04-19-95 **IRB#:** ED-95-074

Proposal Title: THE EFFECT OF HOMOGENEOUS HOUSING AND GENDER ON THE PSYCHOSOCIAL DEVELOPMENT OF ENGINEERING AND HONOR STUDENTS

Principal Investigator(s): Marcia Dickman, Amjad Ayoubi

Reviewed and Processed as: Exempt

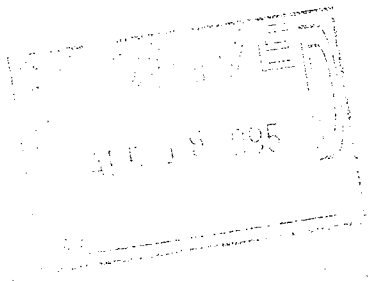
Approval Status Recommended by Reviewer(s): Approved

APPROVAL STATUS SUBJECT TO REVIEW BY FULL INSTITUTIONAL REVIEW BOARD AT NEXT MEETING.
APPROVAL STATUS PERIOD VALID FOR ONE CALENDAR YEAR AFTER WHICH A CONTINUATION OR RENEWAL REQUEST IS REQUIRED TO BE SUBMITTED FOR BOARD APPROVAL.
ANY MODIFICATIONS TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR APPROVAL.

Comments, Modifications/Conditions for Approval or Reasons for Deferral or Disapproval are as follows:

Signature:  Date: April 24, 1995

Chair of Institutional Review Board



IRB# ED-95-074

APPLICATION FOR REVIEW OF HUMAN SUBJECTS RESEARCH

(PURSUANT TO 45 CFR 46)

OKLAHOMA STATE UNIVERSITY INSTITUTIONAL REVIEW BOARD

Title of project: THE EFFECT OF HOMOGENEOUS HOUSING AND GENDER ON THE PSYCHOSOCIAL DEVELOPMENT OF ENGINEERING AND HONOR STUDENTS.

Please attach a copy of project thesis or dissertation proposal.

I agree to provide proper surveillance of this project to ensure that the rights and welfare of the human subjects are properly protected. Additions to or changes in procedures affecting the subjects after the project has been approved will be submitted to the committee for review.

PRINCIPAL INVESTIGATORS: Marcia Dickman, Ph.D.

Amjad Ayoubi, MS

Department: Applied Behavioral Studies in Education **College:** Education

Faculty Member's Campus Address: 310 North Murray **Campus Phone:** 4-6036

Student's Address: 101 Kerr Hall **Campus Phone:** 4-6794

Type of Review Requested:

[X] EXEMPT [ ] EXPEDITED [ ] FULL BOARD

1. Briefly describe the background and purpose of the research.

Grouping students who live in residence halls according to certain criteria such as academic ability, or major of study is a method used to structure the social environment in order to help students perform better academically. What other effects are there on students who choose to be grouped homogeneously in residence halls?

This research will examine the effect of living on engineering floors, and honors floors on the psychosocial development of college students.

2. Who will be the subjects in this study and how will they be solicited or contacted.?

The subjects are OSU students who are currently living in the residence halls. These subjects are divided into six groups:

Group 1: Male engineering students living on the male engineering floor
Group 2: Female engineering students living on the female engineering floor.
Group 3: Male honors students living on one of the honors floors.
Group 4: Female honors students living on one of the honors floors.
Group 5: Male students living on an ordinary floor
Group 6: Female students living on an ordinary floor

The students will be sent a letter inviting them to participate in the study and will be given the option to choose one of three times to participate.

3. Briefly describe each condition or manipulation to be included within the study.

Not applicable for this research project.

4. What measures or observations will be taken in the study? Copies of any questionnaires, tests, or other written instruments that will be used must be included.

The following measures will be taken from the study, these measures will be taken using the Student Developmental Task and Lifestyle Inventory:

1. Level of establishing and clarifying purpose
2. Level of developing mature interpersonal relationships
3. Level of developing academic autonomy

Also taken will be demographic information that include: high school GPA and ACT scores, number of high school extra curricular activities, size of high school, gender, ethnicity, age,

cumulative college GPA, academic classification, major of study, and place of residence on campus.

5. Will the subjects encounter the possibility of stress or psychological, social, physical, or legal risks which are greater, in probability or magnitude, than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests?

No

6. Will medical clearance be necessary before subjects can participate due to tissue or blood sampling, or administration of substances such as food or drugs, or physical exercise conditioning?

No

7. Will the subjects be deceived or misled in any way?

No

8. Will there be a request for information which the subjects might consider to be personal or sensitive?

No

9. Will the subjects be presented with materials which might be considered to be offensive, threatening, or degrading?

No

10. Will any inducements be offered to the subjects for their participation?

Yes. Subjects will have the choice to have their name put in a drawing for $100.00, one hundred dollars, to be given at the conclusion of data collection.

11. Will a written consent for be used?

Yes. (The form is attached).

12. Will any aspect of the data be made part of any record that can be identified with the subject?

No.

13. Please describe, in detail, the steps to be taken to ensure the confidentiality of the collected data.

1. Data will be collected in one location, students will be spaced sufficiently apart to insure privacy in completing the instruments.
2. Students will be given the data in an enclosed manila envelope with no identification marks.
3. Students will be asked to enclose and seal the completed instruments in the same envelope without any identification.
4. All instruments will be stored in a locked file cabinet in a restricted access office.
5. The subjects will be given numbers to identify them
6. Only the researcher will enter the information into data files.
7. After data analysis all instruments will be shredded.

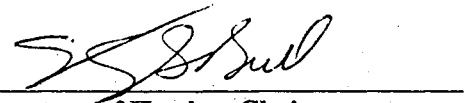
14. Will the fact that a subject did or did not participate in a specific experiment or study be made part of any record available to supervisor, teacher, or employer?

No

15. Describe the benefits that might accrue to either the subjects or society.

Students who choose to live on engineering floors and honors floors will have a better understanding of the effects and outcomes of living in these environments. The additional information collected from this research will help assist students, and parents when choosing a homogeneous campus living environment.

Student affairs and residence halls administrators will be able to evaluate the effect of homogeneous living environments and make decisions that will best assist the students during their college careers.



Signature of Head or Chairperson
For Dale Fuqua

4/18/95
Date

Department of Applied Behavioral Studies in Education
Department or Administrative Unit

Signature of College/Division Research Director

19 April 95
Date

APPENDIX C

PERMISSION FROM DIRECTOR OF RESIDENTIAL LIFE

OSU

Oklahoma State University

RESIDENCE HALLS — EAST

STILLWATER, OKLAHOMA 74078-0636
KERR-DRUMMOND AREA OFFICE
405-744-6794

To Whom It May Concern:

This letter provides support and approval for Amjad Ayoubi's research in Kerr, Drummond, and Parker halls. This is Department of Residential Life support and approval only and is contingent upon the research being approved and supervised by the Institutional Review Board.

It is anticipated that this research will be of assistance to the Oklahoma State University Department of Residential Life and may be of assistance to the field in general. If clarification is needed on this letter, please contact me.

Sincerely,

Bob Huss
Director

pc: Kent Sampson

APPENDIX D

MEANS AND STANDARD DEVIATIONS TABLES

Table A

Descriptive Statistics for SDTLI Subtask: Academic Autonomy by Gender and Housing Type

		Engineering	Honors	Heterogeneous	Total
Males	M	6.22	6.23	4.46	5.45
	S	2.26	2.35	2.72	2.60
	n	18	13	24	55
Females	M	6.00	6.41	4.72	5.61
	S	2.78	2.32	3.09	2.83
	n	15	17	22	54
Total	M	6.12	6.33	4.59	5.53
	S	2.47	2.29	2.87	2.71
	n	33	30	46	109

Table B

Descriptive Statistics for SDTLI Subtask: Career Planning by Gender and Housing Type

		Engineering	Honors	Heterogeneous	Total
Males	M	9.67	9.08	9.29	9.36
	S	4.51	4.44	4.70	4.50
	n	18	13	24	55
Females	M	9.00	10.06	8.73	9.22
	S	4.31	5.41	4.75	4.80
	n	15	17	22	54
Total	M	9.36	9.63	9.02	9.29
	S	4.36	4.96	4.68	4.63
	n	33	30	46	109

Table C

Descriptive Statistics for SDTLI Subtask: Cultural Participation by Gender and Housing Type

		Engineering	Honors	Heterogeneous	Total
Males	M	2.72	3.92	3.04	3.14
	S	1.27	1.61	1.46	1.48
	n	18	13	24	55
Females	M	3.27	3.94	2.81	3.30
	S	1.16	1.14	1.33	1.30
	n	15	17	22	54
Total	M	2.97	3.93	2.93	3.22
	S	1.24	1.34	1.39	1.39
	n	33	30	46	109

Table D

Descriptive Statistics for SDTLI Subtask: Emotional Autonomy by Gender and Housing Type

		Engineering	Honors	Heterogeneous	Total
Males	M	4.56	5.38	4.75	4.83
	S	1.92	2.14	1.89	1.95
	n	18	13	24	55
Females	M	4.80	5.18	4.23	4.69
	S	1.82	1.74	1.95	1.86
	n	15	17	22	54
Total	M	4.67	5.27	4.50	4.76
	S	1.85	1.89	1.92	1.90
	n	33	30	46	109

Table E

Descriptive Statistics for SDTLI Subtask: Educational Involvement by Gender and Housing Type

		Engineering	Honors	Heterogeneous	Total
Males	M	9.56	10.92	8.75	9.53
	S	2.75	2.47	3.31	3.02
	n	18	13	24	55
Females	M	10.20	11.76	9.77	10.52
	S	3.14	3.17	3.74	3.46
	n	15	17	22	54
Total	M	9.85	11.40	9.24	10.02
	S	2.91	2.87	3.52	3.27
	n	33	30	46	109

Table F

Descriptive Statistics for SDTLI Subtask: Life Management by Gender and Housing Type

		Engineering	Honors	Heterogeneous	Total
Males	M	9.50	9.46	9.00	9.27
	S	3.13	2.73	3.58	3.20
	n	18	13	24	55
Females	M	10.33	11.06	9.91	10.39
	S	2.09	2.61	3.38	2.82
	n	15	17	22	54
Total	M	9.88	10.37	9.43	9.83
	S	2.70	2.74	3.47	3.06
	n	33	30	46	109

Table G

Descriptive Statistics for SDTLI Subtask: Life Style Planning by Gender and Housing Type

		Engineering	Honors	Heterogeneous	Total
Males	M	6.33	7.15	6.08	6.42
	S	1.37	2.27	2.86	2.33
	n	18	13	24	55
Females	M	6.80	7.42	6.23	6.76
	S	2.34	1.80	2.47	2.26
	n	15	17	22	54
Total	M	6.55	7.30	6.15	6.59
	S	1.86	1.99	2.65	2.29
	n	33	30	46	109

Table H

Descriptive Statistics for SDTLI Subtask: Peer Relationships by Gender and Housing Type

		Engineering	Honors	Heterogeneous	Total
Males	M	7.94	8.38	8.33	8.22
	S	2.55	2.47	2.78	2.59
	n	18	13	24	55
Females	M	9.13	8.71	8.09	8.57
	S	1.73	2.34	3.02	2.50
	n	15	17	22	54
Total	M	8.48	8.57	8.22	8.39
	S	2.27	2.36	2.87	2.54
	n	33	30	46	109

Table I

Descriptive Statistics for SDTLI Subtask: Salubrious Lifestyle by Gender and Housing Type

		Engineering	Honors	Heterogeneous	Total
Males	M	4.50	4.85	5.17	4.87
	S	1.92	2.04	2.30	2.10
	n	18	13	24	55
Females	M	4.20	5.12	3.91	4.37
	S	2.04	2.12	1.51	1.91
	n	15	17	22	54
Total	M	4.36	5.00	4.57	4.62
	S	1.95	2.05	2.04	2.01
	n	33	30	46	109

Table J

Descriptive Statistics for SDTLI Subtask: Tolerance by Gender and Housing Type

		Engineering	Honors	Heterogeneous	Total
Males	M	4.72	6.84	4.67	5.20
	S	2.24	1.99	1.97	2.23
	n	18	13	24	55
Females	M	6.67	6.94	6.27	6.59
	S	1.54	1.78	1.88	1.75
	n	15	17	22	54
Total	M	5.61	6.90	5.43	5.89
	S	2.16	1.84	2.07	2.12
	n	33	30	46	109

VITA

Amjad W. Ayoubi

Candidate for the Degree of

Doctor of Philosophy

Thesis: THE RELATIONSHIP OF HOMOGENEOUS HOUSING AND GENDER TO THE PSYCHOSOCIAL DEVELOPMENT OF ENGINEERING AND HONORS STUDENTS

Major Field: Applied Behavioral Studies

Biographical:

Education: Graduated from De La Salle High School, Jerusalem in May 1980. Received Bachelor of Science degree in Engineer Technology from Oklahoma State University and a Master of Science degree in Counseling and Student Personnel in December, 1985 and December, 1990, respectively. Completed the requirements for the Doctor of Philosophy degree at Oklahoma State University in December 1998.

Experience: Residence Hall Director and International Student Advisor, St. Mary of the Plains, Dodge City, Kansas, August 1987 to July 1988. Graduate Assistant, Department of Residential Life, Oklahoma State University, Stillwater, Oklahoma, August 1988 to October 1992. Residence Hall Coordinator, Department of Residential Life, Oklahoma State University, Stillwater, Oklahoma, November 1992 to December, 1995. Senior Placement Counselor, University Placement, Oklahoma State University, Stillwater, Oklahoma, January 1996 to November, 1996. Interim Coordinator, University Placement, Oklahoma State University, Stillwater, Oklahoma, December 1996 to July 1, 1997. Director, OSU Career Services, Oklahoma State University, Stillwater, Oklahoma, August 1997 to present.

Membership: National Association of Colleges and Employers, Southwest Association of Colleges and Employers, Oklahoma Association of Colleges and Employers