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An exploration of three residence hall types and the academic and social integration of first year students

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An Exploration of Three Residence Hall Types and the Academic and Social Integration
of First Year Students

by

Dorothy E. Paine

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Education
Department of Adult, Career and Higher Education
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student engagement

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This publication is dedicated in memory of my sister Gail who taught me the most important lessons of family, faith, and friends and to my daughter Sadie, who teaches me new life lessons every day.

Table of Contents

List of Tables	iii
Abstract	v
Chapter 1 Introduction	1
Statement of the Problem	5
Conceptual Framework	7
Purpose of the Study	8
Research Questions	8
Significance of Study	9
Delimitations	9
Limitations	10
Definition of Terms	10
Organization of Remaining Chapters	11
Chapter 2 Review of Related Literature	13
Benefits of Living on Campus	13
Retention and persistence	15
Academic/cognitive outcomes	20
Changes in Residence Hall Structure	24
Campus Physical Environments	26
Integration and Involvement	29
Tinto's theory of institutional departure	29
Astin's involvement theory	33
The Importance of the First Year	35
Summary	37
Chapter 3 Methods	39
Research Questions	39
Variables	40
Independent variables	40
Dependent variables	40
Participants	41
Instrument	42
Reliability and Validity	44
Procedures	45
Analysis of Results	46

Chapter 4 Analysis of the Data	48
Research Question 1	48
Research Question 2	56
Research Question 3	60
Research Question 4	61
Chapter 5 Conclusions and Recommendations	63
Summary of Findings	63
Research Question 1	63
Research Question 2	64
Research Question 3	66
Research Question 4	68
Limitations	70
Implications for Practice	73
Recommendations for Future Research	76
Summary	79
References	81
Appendices	91
Appendix 1A: IIS Factor “Student”	92
Appendix 1B: IIS Factor “Faculty”	93
Appendix 2: Survey Instrument	94
About the Author	End Page

List of Tables

Table 1	Correlations Among the Subscales of the Institutional Integration Scale	45
Table 2	Academic and Intellectual Development	49
Table 3	Peer Group Interactions	49
Table 4	Interactions with Faculty	50
Table 5	Faculty Concern for Student Development and Teaching	50
Table 6	Institutional and Goal Commitment	51
Table 7	Levene's Homogeneity of Variance	52
Table 8	Cronbach's Coefficient Alpha for Subscales of Institutional Integration Scale	53
Table 9	Pearson Product Moment Correlations Among the Subscales	54
Table 10	ANOVA Results for Academic and Intellectual Development Subscale	55
Table 11	ANOVA Results for Peer Group Interaction Subscale	55
Table 12	ANOVA Results for Interactions with Faculty Subscale	55
Table 13	ANOVA Results for Faculty Concern for Student Development and Teaching Subscale	56
Table 14	ANOVA Results for Institutional and Goal Commitment Subscale	56
Table 15	Means, Variability, and Normality for Fall GPA	57
Table 16	Means, Variability and Normality for Spring GPA	57
Table 17	Means, Variability and Normality for SAT Scores	58
Table 18	ANCOVA Results for Fall GPA	59

Table 19	ANCOVA Results for Spring GPA	59
Table 20	Mean GPAs Adjusted for SAT Scores	59
Table 21	Students Enrolled/Not Enrolled in Fall 2006	60
Table 22	Students Involved/Not Involved	62
Table 23	Persistence Rates from Fall 2005 to Fall 2006 for Students in Three Types of Residence Halls	67
Table 24	Differences in GPAs of Students Enrolled/Not Enrolled for Fall 2006	68
Table 25	Percentage of Students with GPAs below 2.0 for Fall 2006	68
Table 26	Residence Hall Impact on Academics, Involvement and Overall Experience	75

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ABSTRACT

Living on campus has long been an important part of many students' collegiate experience. Most research describing the benefits of living on campus was conducted in the 1960s and 1970s and was based upon students living in double rooms on double loaded corridors with community bathrooms. In recent years, the style of residence hall buildings has changed from these traditional rooms to suite and apartment-style housing offering more privacy and greater amenities to students. This study sought to examine how first year students living in three different types of residence hall environments differ on measures of social and academic integration, academic performance, involvement, and retention from the first to second year.

One hundred and ninety one first year students living in three different types of residence halls (traditional, suite-style, and apartment-style) completed the Institutional Integration Scale during spring 2006. Students also gave permission for their GPAs and enrollment information to be obtained from the Registrar's Office.

Results indicated that there were no significant differences in the social and academic integration, academic performance, involvement, or persistence among students living in these three different types of residence halls. While this study did not point to statistically significant differences, care must be taken in generalizing this finding to

other settings due to the limited sample size used in this study. Suggestions for further research in this area are provided.

Chapter 1

Introduction

Living on campus has long been part of the collegiate experience for many students. The often sparsely furnished and crowded dormitories offered by colleges in the 19th century provided students with a sense of shared experience and also provided a practical way for dealing with the housing needs of students at rural colleges (Rudolph, 1990). In the 1950s and 1960s, housing on campuses grew at a rapid rate as more students entered the university system partly in response to the passage of the GI Bill. In addition, the passage of Title IV of the Housing Act of 1950 provided federal money for the building of college housing and helped to fuel the massive expansion of dormitories across the nation. The goal of this legislation was to provide institutions the opportunity to maximize the numbers of students who could be housed and fed for the least cost (Schroeder & Mable, 1994). As a result, this was the era in which many high-rise, bed saturated facilities were built on college campuses with little thought given to the educational nature of the living experience.

At the same time colleges and universities were experiencing this rapid growth, many of the student demonstrations and demands of the turbulent 1960s brought about changes in the staffing of dormitories at most institutions. Housemothers who had served a parental role in many of these facilities were replaced with student affairs educators possessing advanced degrees. The roles and responsibilities of these staff members were quite different with little to no attention being given to curfews, bed checks, and

instruction in social graces as housemothers had emphasized, and increased attention given to advising students on issues of self-governance, providing social and educational programming, and coordinating a variety of services for students (Schroeder & Mable, 1994; Frederiksen, 1993).

By the 1970s, the focus on simply building more spaces and housing more students had somewhat subsided and the nature of the dormitory began to change. Staff members now referred to these buildings as “residence halls” in an attempt to shift the focus from simply providing students a place to sleep and eat, to a focus on providing an educationally rich living environment (Frederiksen, 1993). With staff members bringing backgrounds in education coordinating the operation of residence halls, research began to be conducted on the residence hall environment and the benefits students might reap by living in these facilities.

Many studies conducted during the 1970s and 1980s described a variety of benefits of living on-campus as compared to living off-campus. The most consistent benefits found in these studies for students living on-campus seem to be increased persistence and graduation rates, as well as increased involvement in the university (e.g. Astin, 1977; Chickering, 1974; Herndon, 1984; Scott, 1975).

Residence hall students consistently have shown higher levels of persistence and degree attainment compared to those who live off-campus (Astin, 1973, 1975, 1977; Chickering, 1974; Herndon, 1984; Levin & Clowes, 1982). Even when such factors as past academic achievement, socioeconomic status, and aptitude are controlled for, students who live in on-campus residence halls demonstrate significantly higher rates of persistence and graduation than students who have never had this experience (Blimling,

1993a; Pascarella, Terenzini, & Blimling, 1994). Astin's (1977) research on college dropouts suggests that living in a residence hall may add as much as a 12% advantage to a student's chance of persisting and graduating.

Similarly, students living on campus traditionally have shown higher levels of participation in college activities than those living off-campus (Billson & Terry, 1982; Chickering, 1974; Pascarella, 1984; Welty 1976). The importance of involvement has been highlighted by Alexander Astin's work (1984) which suggests that students who are more involved in their colleges and universities are more likely to be retained. Residence hall students traditionally are more involved in a variety of ways including greater participation in extra curricular activities, greater interaction with faculty, and greater likelihood of being involved in student government (Astin, 1984).

Findings on the academic achievement of residence hall students when compared to commuter students have not been as consistent as the findings previously mentioned. Although several studies suggest that students living on-campus show greater gains in academic achievement than commuting students (May, 1974; Moos & Lee, 1979; Nowack & Hanson, 1985; Simono, Wachowiak, & Furr, 1984), other studies show no difference between the groups (Clodfelter, Furr, & Wachowiak, 1984; Grosz & Brandt, 1969; Hountras & Brandt, 1970). A meta-analysis of 34 studies by Blimling (1989) found that in most cases where findings showed that residence hall students performed better than commuters, there was no adjustment made for past academic performance. Once academic performance was statistically controlled for, there did not seem to be an appreciable difference on measures of academic achievement between these two groups.

Finally, findings of prior research also have suggested that residence hall students show greater personal growth than commuting students in areas such as self-esteem (Lundgren & Schwab, 1979; Marron & Kayson, 1984), independence and autonomy (Lundgren & Schwab, 1979), and a reduction in authoritarianism (Chickering, 1974). While most of these aforementioned studies are now somewhat dated, the more recent literature on residence halls has tended to center on the role that learning communities and floors or buildings which are assigned around an academic theme contribute to student learning and development.

The residence hall environment on college campuses has changed dramatically since the 1980s. Colleges and universities are again building and renovating residence halls in record numbers to house increased numbers of students. In addition, student expectations for their residence halls have changed. Students are demanding greater privacy and increased amenities in their residence hall environment than ever before and schools are scurrying to meet the demands of this consumer oriented clientele. Few schools are currently building the typical residence halls of the past that provided double rooms, community or suite-style bathrooms, and long corridors. Apartment-style residence halls typically offering single bedrooms and shared living rooms, kitchens, and bathrooms are emerging from these new student demands as well as from increased competition from off-campus apartment complexes. (Argon, 2003; Banning, McGuire & Stegman, 1995; Kellogg, 2001).

In a Spring 2005 study at the University of South Florida, students living in residence halls were asked to complete the ACUHO-I/EBI Resident Satisfaction Survey (Educational Benchmarking Institute, 2005). The survey consisted of 81 items and was

organized into 15 factors relating to satisfaction with the residence halls. Students living in apartment-style residence halls consistently reported less satisfaction than those living in more traditional or suite-style residence halls when it came to issues of interaction with others and opportunities to meet other people. While students living in apartment-style residence halls did report greater satisfaction with their physical space in their room and their sense of privacy, these factors were not as predictive of overall satisfaction. The factor that best predicted overall satisfaction with the residence halls was interaction with others in the hall (Educational Benchmarking Institute, 2005)

Statement of the Problem

Many of the gains commonly associated with living on campus have been thought to come from the increased interaction and community derived from residence hall living (Astin, 1975; Blimling, 1993b; Stodt, 1987). The apartment-style residence halls being built today however, offer a different type of living environment than the traditional or suite-style residence halls of the past. Increased privacy is an important component of these newer designs, which results in fewer places in which residents are required or encouraged to share space. Students in apartment-style housing do not interact with their peers in the same ways as those in more traditional residence halls, and opportunities for interaction are diminished (Blimling, 1993a). Apartment residents have been found to have less satisfaction with the community environment in their residence hall and report relatively few interactions with students outside of their apartments (Whalen & Morris, 1989). Because these newer apartment-style residence halls offer a different type of living environment than that found in the 1970s and 1980s when many of the previously cited studies exploring the benefits of living on campus were conducted, the question

arises whether newer residence halls offering greater privacy result in the same types of benefits as those so widely researched and demonstrated in the past.

In addition to the role that residence halls play in the lives of students, the first semester of a student's college career has been noted to be crucial in regard to his/her success at the university (Tinto, 1993; Levitz & Noel, 1989; Pascarella & Terenzini, 1991; Upcraft & Gardner, 1989). When grouping the issues of the impact of residence halls on students, the types of residence halls students might encounter, and the importance of the first semester of college life, an important and under-researched question arises regarding how the types of residence halls students live in during their first semester in college impact their experience.

In this researcher's review of the literature in such databases such as Dissertation Abstracts, ERIC, Google Scholar, and Wilson Plus as well as a review of commonly used student affairs journals including the Journal of College Student Development, NASPA Journal, and the Journal of College and University Student Housing, little or no prior research has examined the impact of different types of residence halls with the exception of those with an academic or special interest focus compared to those without such focus. Consequently, new research needs to be conducted with examines the relationship between alternative types of residence halls and important student outcomes.

Most of the 3 million students entering institutions of higher education each year enter with the eventual goal of graduation in mind (National Center for Education Statistics, 2005; Sax, Lindholm, Astin, Korn & Mahoney, 2002). However, more students leave colleges and universities prior to receiving a degree than after (ACT, 2005). Typically those students who choose to leave institutions do so during their first

year in school (Tinto, 1993; ACT, 2005). Specifically, as colleges and universities struggle to improve persistence and graduation rates, it is important to determine which of several different types of residence hall arrangements best contribute to the achievement of this goal.

Conceptual Framework

Alexander Astin (1984) posits a theory of student involvement relating to persistence that suggests that students who involve themselves at greater levels within the university will not only be retained in more significant numbers, but will experience greater gains in student learning and personal development. Living on campus has long been cited by Astin as one of the environmental factors which leads to increased involvement and persistence at colleges and universities. Similarly, Tinto, in his 1993 publication, *Leaving College: Rethinking the Causes and Cures of Student Attrition*, suggests a model of institutional departure which focuses on the important roles academic and social integration play in encouraging student persistence within colleges and universities. Tinto also notes the importance of living on campus as one of the factors leading to increased levels of academic and social integration.

In recent years, the concept of “student engagement” has received increased attention. At the heart of the concept of student engagement is the theory that what students *do* in college matters more than where they came from or what college they attend. Success is derived when students a) devote time and energy to educationally purposeful activities and b) when colleges and universities organize themselves in such a way and invest resources for the purpose of encouraging student participation in these educationally purposeful activities (Kuh, Kinzie, Schuh, Whitt & Associates, 2005). It

suggests that while there is a behavioral component regarding student motivation involved in success, institutions can create environments in which behaviors likely to lead to success are encouraged and rewarded.

In their 2001 book, *Educating by Design*, Strange and Banning note that “common sense and experience suggest that when the physical environment of a campus, building, or classroom supports the desired behavior, better outcomes result” (p. 20). If the desired behavior of our students is interaction with others, thus resulting in increased levels of involvement, academic and social integration, and/or student engagement, then it may seem counter-productive to create residence hall environments that promote less interaction and more privacy for students.

Purpose of Study

The purpose of this study was to investigate if students living in different types of residence hall environments experienced different levels of integration, involvement, or academic achievement during their first year at the university. Ultimately the retention and persistence of students is an important goal of universities. Much of the leading research regarding retention and persistence focuses on the involvement, integration and engagement of students within the university (Astin, 1975; Kuh, Kinzie, Schuh, Whitt & Associates, 2005; Tinto, 1987, 1993), Therefore, the outcomes analyzed in this study were related to measures of academic and social integration, involvement, and academic achievement.

Research Questions:

Is there a relationship between the type of residence hall students live in during their first year in college and students’ social and academic integration?

Is there a relationship between the type of residence hall students live in during their first year in college and their academic achievement after the first and second semesters?

Is there a relationship between the type of residence hall students live in during their first year in college and their persistence from year one to year two after accounting for pre-college academic performance?

Is there a relationship between the type of residence hall students live in during their first year in college and their involvement at the university during the first year?

Significance of Study

Apartment complexes and housing facilities with increased levels of privacy are currently being built at colleges and universities across the nation (Grimm, Balogh, Thompson, & Hardy, 2004). It is important for housing practitioners to have an understanding of how these facilities may help or hinder students from engaging and involving themselves with university life. It is anticipated that this study will provide valuable information to housing practitioners regarding differences in academic and social integration of first-time in college (FTIC) students who live in different types of residence halls. It is hoped, as a result of this research, housing practitioners will be better able to make informed decisions regarding building and renovating residence halls, as well as how resources should be best allocated to provide appropriate experiences for on-campus residents.

Delimitations

The following delimitations were identified in this study. First, the study was limited to students at the University of South Florida living on campus in the fall of 2005

and spring of 2006. Additionally, the study was limited to students who lived in their particular style of residence hall since the Fall 2005 semester. Students who had moved between traditional, suite and apartment-style residence halls during the year were not included in the sample. Finally, the study was limited to those buildings which housed FTIC students only. FTIC students living in residence halls that had a mix of classes were not asked to participate.

Limitations

Students who were identified as part of the sample were not required to participate in the study. Therefore, the generalizability of the results is dependent upon students choosing to complete and return the survey within the time frame allowed.

Additionally, although the instrument used has been recently tested for validity and reliability and revised based on these results (French & Oakes, 2004), the revised instrument has not yet been widely used. Therefore, some limitations of the instrument may not be known.

Definition of Terms

Academic integration: The sharing of norms and values related to academic work operationalized by student's intellectual development combined with academic achievement (Tinto, 1975).

Apartment-style residence hall: Residence halls consisting of 4 person apartments each containing 4 single bedrooms, 2 bathrooms, living room, and kitchen.

First time in college student (FTIC): A student enrolled in his/her first year as a degree seeking student.

Persistence: The rate at which students who begin study at the university return to the university for subsequent semesters. Persistence can be tracked at many points of time but for purposes of this study, it refers to the rate at which students who began as FTIC students in the Summer or Fall of 2005 returned to the University for the Fall 2006 semester.

Residence hall: Any on-campus living facility in which rent is paid to the university in exchange for living quarters.

Social integration: Interactions with peers, faculty and staff in addition to involvement in extra-curricular activities (Tinto, 1975).

Student engagement: A combination of the amount of time and effort students exert towards activities that lead to student success, as well as the ways that universities organize and allocate resources to encourage participation in positive learning experiences (Kuh, Kinzie, Schuh, Whitt, & Associates, 2005).

Student involvement: The amount of physical and psychological energy a student devotes to the educational experience (Astin, 1984, p. 297).

Suite-style residence hall: Residence halls where four students share two double occupancy bedrooms and bathroom facilities located between the rooms.

Traditional-style residence hall: Residence halls with double-loaded corridors, community bathrooms and double occupancy rooms.

Organization of Remaining Chapters

Chapter Two provides an overview of the relevant literature in five areas related to this study. First, studies regarding the impact of residence halls on academic and social integration is discussed. Secondly, an overview of the recent changes in residence

hall structure is explored. Third, Tinto's concepts of academic and social integration as well as Astin's theory of involvement is examined. Fourth, the impact of the physical environment on students is discussed. Finally, the review explores the documentation on how the experiences of the first year contribute or detract from students' success in college.

Chapter Three outlines the methodology for this study and describe the instrument which were used to gather the data. Chapter Four summarizes the analysis and results of the research and Chapter Five explores the implications for practice as well as future recommendations for research.

Chapter 2

Review of Related Literature

The following review of literature begins with a summary of the substantial body of literature regarding the benefits of on-campus living focusing on persistence and retention as well as academic and cognitive outcomes. Next the discussion focuses on recent changes in the structure and architecture of on-campus living environments. Further discussion regarding the impact of campus physical environments is explored. The review then focuses on the concepts of integration and involvement with a review of the theories postulated by Vincent Tinto (1987, 1993) and Alexander Astin (1984). Finally the chapter concludes with a discussion regarding the importance of the first-year of a student's college experience.

Benefits of Living On-Campus

Dormitories have a long history on college campuses. Due to the significant influence of the English residential college system on the design of higher education in the United States, colleges have built dormitories to house students from the early beginnings of the educational system in this country (Rudolph, 1990). A variety of influences have taken us through periods of both great attention and some indifference to the concept of living on campus during the last two centuries. More recent history regarding on-campus living is noted in the post-World War II building boom (Frederiksen, 1993).

Enrollments at colleges and universities surged following World War II partly due to the passage of the Serviceman's Readjustment Act in 1944. With enrollments expected to continue to grow during the 1950's and 1960's, colleges found themselves needing to build student housing quickly and efficiently. Housing administrators focused on building housing that would maximize the number of beds for the least amount of dollars. Little thought was given to the educational nature of these facilities (Frederiksen, 1993).

As housing capacities grew to match enrollments on campus, the focus of housing administrators began to change from the basic need to house and feed students to the potential educational role that these facilities could play in the lives of the students who inhabited them. The concept of the "residence hall" where students lived and learned together replaced the notion of the "dormitory" more commonly defined as a place where students were simply housed for the purposes of sleeping and eating. It was at this point that research began to be conducted regarding the nature of the residence hall environment and its impact on students (Frederiksen, 1993).

Though now mostly dated, a good deal of literature exists regarding the benefits students reap from living on campus. In their 1991 publication, *How College Affects Students*, Pascarella and Terenzini summarized all major research reports regarding the impact of college on students from 1967 through 1990. Through their exhaustive review of the literature, the authors conclude that, "living on campus (versus commuting to college) is perhaps the single most consistent within-college determinant of impact" (p. 611). The authors note that residence hall living has been positively linked to a variety of outcomes including: increases in aesthetic, cultural, and intellectual values; a liberalizing

of social, political, and religious values and attitudes; increases in self-concept, intellectual orientation, autonomy, and independence; gains in tolerance empathy and ability to relate to others; persistence in college; and bachelor's degree attainment (p. 611). Other significant within-college determinants included major field of study, the academic experience, interpersonal involvement, extracurricular involvement, and academic achievement (p. 607). Their more recently published and updated review continues to support the notion that living on campus contributes to important positive outcomes for students including increased persistence and degree attainment (Pascarella & Terenzini, 2005). This latest review indicates that many of the gains associated with living on campus may be indirect rather than direct due to the increased opportunities for social interaction provided when students live on campus. Much of the research on place of residence has focused on increased persistence and graduation rates of on-campus residents (e. g. Astin, 1973, 1977, 1993; Chickering, 1974) while other studies have focused on academic and cognitive outcomes (Inman & Pascarella, 1998; Pascarella, Bohr, Nora, Zusman, Inman & Desler, 1993). Additionally, limited studies have focused on differences between different types of residence hall environments (Blimling, 1993b). An overview of each of these areas is provided below:

Retention and persistence.

Substantial research exists documenting an increase in graduation rates for students who have had the experience of living on campus compared to those who have not (Astin, 1975, 1977, 1993; Blimling, 1993b; Chickering, 1974; Pascarella & Terenzini, 1991, 2005; Pascarella, Terenzini & Blimling, 1994). This finding holds true

even when pre-college characteristics such as past academic performance, aptitude, and socio-economic status are controlled for statistically (Pascarella & Terenzini, 1991).

Recent studies (Ballou, Reavill & Schultz, 1995; Berger, 1997; Christie & Dinham, 1991; Wolfe, 1993) have focused on why these findings consistently hold true. These studies reveal that the interaction with peers and development of community experienced by students living in residence halls contributes to their satisfaction with and commitment to the university leading to enhanced levels of social integration. Tinto (1987, 1993), in his work on retention, noted that students who are more socially and academically integrated into the university will persist at higher levels. The following studies support Tinto's assertion that residence hall students achieve higher levels of integration into the academic and social environments surrounding them.

Christie and Dinham (1991) used a qualitative approach to determine the experiences that influenced first-year college students' perceptions of social integration on the college campus. Their study was conducted at a large, public, research university where a systematic sample of 25 first-time, full time freshmen were selected to participate. Interviews were conducted with 10 of these 25 students during the fall semester and all 25 during the spring semester. In their findings, Christie and Dinham note that two institutional experiences stand out in relation to social integration: living on campus and participation in extracurricular activities. In regards to living on campus, the authors indicate that this experience contributes to students' sense of social integration in the following four ways: meeting other students, developing student friendships, gaining information about social opportunities on campus and shifting away from high-school friends.

A 1995 study by Ballou, Reavill, and Schultz revealed that not only were students who were currently living in residence halls more involved in their campus communities, but those who had previously lived in residence halls scored higher on levels of involvement as well. Participants in this study at a public comprehensive university in the upper Midwest with a total enrollment of 5500 completed the College Student Experiences Questionnaire (CSEQ) which addresses the involvement and effort students put forth in taking advantage of the opportunities for learning at the university. A total of 1027 usable surveys were completed which represented approximately 21% of the undergraduate population. The survey was administered at the midpoint of the spring semester in selected classrooms that offered a comprehensive sample of undergraduate students. Findings indicated that students currently living in residence halls and those who had previously lived in residence halls but currently lived off campus, scored higher on levels of involvement than did students who had never lived in residence halls. This study concludes that residence hall living may have enduring positive effects on students' involvement and subsequent social integration, even after students have moved out of the residence hall. Students who had never lived in a residence hall scored lower on all measures of involvement in this study. However, there is no evidence in the article indicating that any pre-college characteristics were taken into consideration. It may be that students who choose to live in residence halls differ in some way from the outset than students who choose to live off-campus.

Wolfe (1993) conducted a study at a medium sized, public, suburban institution in the mid-Atlantic region, to compare the social and academic integration, persistence, academic success and commitment of commuters and residence hall students who were

involved in a first-year intervention program designed to support and contribute to a sense of community for first-year students. Students participating in the program were enrolled in a one-credit freshmen seminar course, participated in structured and informal activities, volunteer projects, social functions, and support activities, and were provided increased opportunities for interaction with faculty, Student Affairs staff, and peers. Students completed the Institutional Integration Scale (IIS) developed by Pascarella and Terenzini (1980) and revised by Fox (1984). Results revealed that residence hall students scored significantly higher than commuter students on measures of social integration though all other variables (persistence, academic success, commitment, and academic integration), were found to have no significant differences between the groups.

In an attempt to further explore the notion of why residence hall living correlates positively to persistence, Berger (1997) studied the concept of community within the residence hall and how a first-year student's sense of community on his/her residence hall floor may relate to the process of social integration and persistence at the university. Berger theorized that students with a stronger sense of community in their residence halls would be more likely to be fully integrated into the social environment of the campus and therefore, more likely to persist. Students in this study at a private, residential, highly selective university in the Southeast were asked to complete three different surveys during their first year. In August, students completed the Student Information Form (SIF) which gathered information on students' demographics, perceptions, attitudes, and intended college experiences. In October, students completed the Early College Experiences Questionnaire (ECES) developed to gather early information on a wide range of issues related to persistence. In March, students completed the Freshman Year

Survey (FYS) which consisted of an adaptation of Pascarella and Terenzini's (1980) IIS survey as well as items adapted from the SCI survey which measures perceptions of community. The students completing all three surveys, and therefore usable for the study, represented 46% of the entering freshmen class. A path analysis was conducted to analyze the results. Findings indicated that the variable of sense of community in the residence halls had positive direct effects on students' peer and faculty relationships. Additionally, sense of community in the residence halls had positive indirect effects on institutional commitment and intent to re-enroll. This study lends support to the notion that the community experience of living in residence halls contributes positively to students' relationships and, through those relationships, to their commitment to the university and their plans to persist. Berger notes that while the finding that social integration is affected by how students view their community is not surprising, it serves to support Tinto's assertion regarding the importance of residence halls in the process of social integration on campus. Unfortunately, no information exists regarding the type of residence halls these students lived in while taking part in this study.

In summary, while it seems clear that students living in residence halls tend to persist at higher rates than other students, it seems much of this is an indirect effect that centers on the increased community and interaction residence hall students experience. Most of these studies do not indicate the type of residence halls students live in. Consequently, one must wonder if students are living in a residence hall that offers less opportunity for community and interaction whether higher persistence rates would continue to be found.

Academic/cognitive outcomes.

Compared to these consistent findings, studies related to the academic and cognitive outcomes of students living in residence halls are mixed. Chickering, in his 1974 book, *Commuters versus Residents*, found that commuter students and residence hall students did not show any appreciable difference in their academic performance once an adjustment was made for pre-college characteristics. Little evidence since then has refuted this finding.

Despite the fact that several studies have reported that students living in residence halls obtain higher GPAs than commuting students, in a meta-analysis of these studies, Blimling (1989) found that many of them failed to take into consideration pre-college academic performance. Blimling analyzed 21 studies pertaining to academic performance of residence hall students which appeared in a refereed journal, a dissertation, or an ERIC document between 1966 and 1987. Only studies which provided enough statistical information to compute effect sizes were included. Three separate meta-analyses were performed comparing the following groups: 1) residence hall students compared with students living at home, 2) residence hall students compared with students living in fraternity and sorority houses, and 3) residence hall students compared with students living in off-campus apartments.

Findings for the first analysis indicated that the magnitude of the effect size was determined by whether pre-college characteristics were taken into consideration. When larger effect sizes were reported, the study typically did not involve a measure of pre-college characteristics. After eliminating those studies which did not control for initial academic performance, the meta-analysis determined that there was no significant

difference in academic achievement between residence hall students and students living at home. The results of 2nd and 3rd meta-analyses indicated that residence hall students were likely to perform slightly better than those living in Greek houses or living in off-campus apartments. However, the advantage was very slight and in the case of the off-campus apartment comparison, it would take two additional studies with null findings to alter the results.

While the studies described above focus on academic achievement as demonstrated through GPA, a 1993 study by Pascarella, et al., argued that GPA may not be the best predictor of academic achievement and sought to explore areas of cognitive growth defined by reading comprehension, mathematical reasoning, and critical thinking. They hypothesized that residence hall students would show higher levels of cognitive growth than commuting students. They based their hypothesis on the theory that the increased involvement of residence hall students in the academic and social systems of the college environment would contribute to this growth. The study was conducted at a large, Research I University enrolling approximately 25,000 students of which only 1000 resided on campus. A random sample of 210 incoming freshmen was chosen resulting in 40 residence hall students and 170 commuting students. Students were administered the Collegiate Assessment of Academic Proficiency (CAAP) test and an analysis of covariance was performed which controlled for the following: pretest scores on reading comprehension, mathematics, and critical thinking skills; student age; total number of credit hours for which the student was enrolled as a freshman; average hours worked per week during the freshman year; and a measure of academic motivation. Results of this research indicated that residence hall students performed significantly better than

commuting students on measures of critical thinking. While residence hall students also scored higher on measures of reading comprehension and mathematical reasoning, the results were not statistically significant. Unfortunately, there is no description of the physical layout of the residence hall rooms included to determine if these residence hall students were living in traditional, suite, or apartment-style housing.

Conversely, a later study conducted by Inman and Pascarella (1998) found that place of residence had no impact on measures of critical thinking as previously hypothesized. Data for this study were gathered from a subset of 23 schools which participated in the National Center on Postsecondary Teaching, Learning and Assessment (NCPTLA) survey. The data from 6 schools representing 1 community college, 1 liberal arts college, 2 research universities, 1 historically Black institution, and 1 comprehensive state university were included in the study. These data from these 6 schools provided for an even distribution of commuter and residence hall students. In an attempt to explain this unexpected finding, Inman and Pascarella note that although the sample provided for an even distribution of resident and commuter students, further analysis of the subset used indicated that the overall demographics at the institutions surveyed were primarily commuter. The authors speculate that perhaps these primarily commuter schools have more support mechanisms in place to help meet the needs of commuter students than primarily residential colleges would have. However, the previous findings by Pascarella, et. al. (1993), were also derived from a study at a commuter campus. Regardless, the findings in the Inman and Pascarella study do not support the hypothesis that residence hall students demonstrate greater levels of critical thinking than commuters. In further analysis of this study, measures of involvement with the university were studied to

determine their impact on critical thinking. Findings in this area supported the notion that students who were more involved at the university would demonstrate higher levels of critical thinking skills. Although Inman and Pascarella initially expected to find both residence and involvement to be significant contributors to the development of critical thinking, their initial hypothesis indicated they expected involvement to be the mediator between residence and critical thinking. Stated in their words, “the involvement factors would explain away the differences between resident and commuter student” (p. 564). There is no information included in the study regarding the type of residence halls these students lived in.

A 1993 study by Thompson, Samiratedu, and Rafter at a regional public university in the southeast explored the relationship between on-campus living during the freshman year and the academic performance, progress, and persistence of developmental students. For the purpose of this research, developmental students, were defined as, “those who do not meet requirements for regular admission to a university because of inadequate skills in reading, composition, and/or mathematics” (Thompson, et. al, 1993, p. 42). Similarly, regularly admitted students who lived on-campus also scored higher on measures of persistence and progress but not on academic performance (as defined by GPA). The authors conclude that perhaps residence hall living during the freshman year may have the greatest impact academically on developmental students. Although the authors do not discuss it, this outcome could be related to the concept of regression towards the mean where treatment may be most effective on those whose scores are farthest from the average.

Currently the literature demonstrates mixed findings on the issue of academic outcomes in relation to place of residence. While some studies support the notion that residence hall students may show greater academic achievement or cognitive development than their peers who reside elsewhere, there is some evidence to suggest this may be more of an indirect rather than a direct effect due to higher levels of interaction and social integration of residence hall students. Further study regarding the academic outcomes of students living in residence halls is certainly warranted.

In summary, while much research has indicated that students living in residence halls benefit in a wide variety of areas over those living off-campus, many of these benefits seem to be due to the increased levels of interaction and involvement found among residence hall students as compared to commuters. It seems that residence hall environments, at least those that have typically been studied, provide an atmosphere that encourages this interaction and involvement for students, leading to higher rates of persistence and some cognitive development. Comparisons among students living in different types of residence halls, however, have not been examined.

Changes in Residence Hall Structure

Today's college students demand a different type of housing than has traditionally been offered on university campuses (Argon, 2003). Blimling (1993a) noted over a decade ago that the notion of the shared room on a double-loaded corridor with a community bath was becoming outdated. While demand for housing on campus continues to be high, many students today who have rarely shared a bedroom, and perhaps not even a bathroom, with a family member seek increased levels of privacy and more amenities than ever before in their residence halls (Kellogg, 2001). In a 1995

qualitative study of housing administrators, the issue of lack of privacy was the most consistent student concern noted by administrators (Banning, McGuire & Stegman, 1995).

In a recent survey conducted by the Association of College and University Housing Officers—International in the Fall of 2004, results from 284 schools indicated that 55% of facilities being built that year were apartment-style facilities. Only 16.8% represented traditional or modified traditional rooms, 35% were suite-style housing, and 4.4% were labeled as other (Grimm, Balogh, Thompson, & Hardy, 2004). (Note, some building projects include more than one type of housing. This is why percentages do not total 100%). Of the schools responding to the survey, 59% were public, 40% private and represented a variety of institutional and housing program sizes. Results from the previous year's pilot study were similar. Apartment-style housing again represented 55% of the facilities being built, 39% were suite-style, 3% were traditional rooms, and 3% were stand alone houses (Grimm, Balogh & Hamon, 2003; S. Hamon, personal communication, March 15, 2004). Obviously, apartments are becoming the building of choice on college campuses and are being built to offer many of the amenities that students demand such as private bedrooms, semi-private bathrooms, and full kitchen facilities.

Little research has been conducted on whether differences exist in student outcomes when students live in apartment-style residence halls rather than traditional style residence halls. In one of the few studies, Whalen and Morris (1989) found students living in apartment housing have fewer interactions with students, report greater social distance, and are less satisfied with the community in their halls. In a more recent study,

upperclass students at a large, Midwestern, land-grant institution, who were assigned to a new apartment facility were surveyed on their expectations regarding their experience in the apartments. Pre- and post-tests of the University Residence Environment Scale (URES) were administered and focus groups were conducted regarding student expectations for their apartment living as well as their experiences after one semester of apartment living. Results indicated that these students reported less social interaction and less activity in their living environment than was expected prior to moving into the apartments. However, they reported more of a sense of independence including less conformist behavior than expected (Furbeck & Whalen, 2002). Blimling (1993a) notes:

When students move into apartments instead of into traditional halls, the social organization and peer environment change. The kind and degree of mutually shared experiences students have are different and are often confined to a more closed social network. The dynamics of group interaction, the diversity of students with whom students share common experiences, and the power and influence of primary peer associations are redefined by the architecture of the living unit (pp. 12-13).

In this author's review, no research could be found that looked at the experience of first-year students who live in university owned and managed apartments.

Campus Physical Environments

A variety of disciplines, including architecture, social psychology, and cultural anthropology give support to the notion that the physical environment influences human behavior (Pascarella & Terenzini, 2005). Winston Churchill stated the concept as, "we shape our buildings and they shape us" (Strange & Banning, 2001, p. 12). Both the

physical and symbolic characteristics of our surroundings as well as the number and kinds of individuals found in these surroundings may encourage or hinder certain behaviors (Pascarella & Terenzini, 2005).

Certainly the residence hall environment is one that can provide rich data regarding the impact of the physical environment on behavior of students. Most research in this area, however, is now somewhat dated. What does exist tends to center primarily on the impact of high-rise vs. low-rise residence halls as well as the impact of long vs. short corridors.

The *long double-loaded corridor* is a term used to describe a traditional residence hall consisting of a straight corridor with rooms located across from each other along the hallway. Blimling (1993b) reviewed several studies regarding the comparison of students on long corridors vs. short corridors. While long corridors were typically anything representing 20-40 rooms on the corridor, short corridors were anything less than the long corridor as defined in the given study. Some of the short corridors represented suite arrangements. Analysis of these studies indicated that students living on short corridors and in suite arrangements were less inhibited in their social interactions with other students. Furthermore, the students on short corridors noted greater satisfaction with their living environments. Blimling theorizes that larger floor environments consisting of 40 or more students may be too challenging for students interpersonally and that there may be a limit to the number of relationships students can maintain within their living environment.

Studies regarding high and low-rise residence halls and their impact on students indicate that students living in low-rise residence halls (typically defined as five floors or

less) report a better social climate but not necessarily increased levels of satisfaction (Blimling, 1993b). Some differences may exist depending upon where students live in a high-rise residence hall. While Wilcox and Holahan (1976) found students living on lower floors rated the social climate of the residence hall higher than those on upper floors, Mandel, Baron, and Fisher (1980) noted that students on lower floors expressed more concern regarding crowding and privacy issues.

The types of residence halls being constructed on college campuses today are reflective of these former studies of environment. Rarely are high-rise residence halls built in this day and age. In addition, smaller wings or pods are typically defined architecturally in residence halls as opposed to the long corridors which were often used as a way to maximize space in the '70s and '80s. However, as housing practitioners and architects have taken these considerations under advisement, other needs such as increased privacy and the call for greater amenities have also shifted the way residence halls are built. Continued research needs to be conducted on how the structure of these newer residence halls may impact the experience of students living on campus.

Though not a great deal of recent research exists beyond that previously mentioned on the impact of the physical environment of residence halls on students, Blimling (1993a) suggests that the architectural design of residence hall buildings may be the second most powerful influence operating in residence halls (following the peer environment). Kuh and Moneta (2005) note most recently, that “the physical or built environment can shape—for better or worse—students’ behavioral patterns and social choices. For example, the amount, locations, and arrangement of physical spaces shape behavior by facilitating or discouraging social interaction” (p. 66). Certainly, as the

physical environment and set-up of the residence hall changes, it is worth noting the impact these changes may have on the behavior of students specifically as it relates to how they interact with one another.

Integration and Involvement

As mentioned previously, much of the theory behind why residence hall students tend to be retained and demonstrate greater gains at their institutions than commuter students, is based on the notion that living in a residence hall enhances a student's ability to integrate into the academic and social networks of the university as well as the increased opportunities for involvement that are afforded to students living on campus. Vincent Tinto and Alexander Astin provide the conceptual framework regarding integration and involvement in their separate but related theories.

Tinto's theory of institutional departure.

Tinto (1987, 1993) offers a theory of institutional departure based on Durkheim's theory of egotistical suicide. Durkheim (as cited in Tinto, 1987, 1993) uses a sociological perspective to explain that suicide can be the result of a person's failure to integrate into the social and intellectual life of the community or society within which he or she lives. Social integration refers to the day to day interactions and personal relationships people develop within their community. Intellectual integration involves the sharing of values and norms common in the community. Durkheim notes that societies with high rates of suicide are often ones in which "social conditions are such as to constrain such membership" (as cited in Tinto, 1993, p. 102).

Tinto expands on Durkheim's theory to develop a model of student persistence that begins with a student having certain background characteristics, skills, and abilities that

influence the student's commitment to both the institution they are attending as well as to the notion of obtaining a degree. This commitment is then channeled through the academic and social experiences (both formal and informal) the student encounters at the institution which lead to varying levels of academic and social integration. This integration in turn continues to alter the student's commitments and intentions. Integrative experiences (e.g. involvement with peers and faculty, participation in student activities, academic success, etc.) serve to reinforce commitment and thereby increase persistence at the institution, while malintegrative experiences (e.g. isolation, non-involvement, failure to achieve academic goals, etc.) undermine commitment and enhance the likelihood of the student leaving the institution (Tinto, 1993, pp 113-115).

If one accepts Tinto's model and applies it to the effort to enhance student persistence, it is easy to see why a university may choose to focus on the concepts of social and academic integration at the institution. Tinto defines formal academic integration as grade performance while informal academic integration consists of the quality of interactions with faculty. Formal social integration is defined by participation in extra-curricular activities, while informal social integration relates mainly to peer group interactions (Tinto, 1993). It is important to note, however, that integration into the academic realm of the university does not necessarily imply integration into the social system and vice versa. Similarly, the interaction of the formal and informal environments of the university is joined and often involves some of the same players and experiences (Tinto, 1993, pp 107-108.) The most notable area where this interaction is seen is probably related to student-faculty relations. Some researchers, in attempting to measure social and academic integration, have placed faculty interactions in the area of

social integration (Liegler, 1997; Mayo, Murguia & Padilla, 1995; Pascarella & Terenzini, 1980). Mayo, et. al. (1995) who define contact with faculty outside of class as formal social integration note,

Although contact with faculty outside of class may be in an informal setting, the effect on the student is the same as other formal contact. Faculty generally interact with undergraduate students outside of class as an extension of their university roles as teacher and academic or career advisor, rarely for the sole purpose of socializing (informal social integration) (p. 543).

Some researchers have attempted to study the interaction between social and academic integration. In a study of 92 nursing students in Israel, research was conducted to determine the influences on academic integration. An 86-item survey was administered which included questions regarding sociodemographic and background variables, family and economic commitments, satisfaction with facilities and services, and social integration as defined by interaction and involvement measures. Results indicated that social integration was the most prominent variable influencing academic integration with those exhibiting higher levels of social integration also exhibiting higher levels of academic integration (Zeitlin-Ophir, Melitz, Miller, Podoshin, & Mesh, 2004).

In a more complex study that looked at the social integration of minority students at a large, predominantly White, public Southwestern university, Mayo, Murguia, and Padilla (1995), found that formal social integration seemed to have a greater positive impact on academic performance than informal social integration. Formal integration was defined as membership in student organizations and interaction with faculty, while informal social integration was defined as interaction with peers. Information was

derived from a phone survey with samples of students representing the majority and each of the three minority groups represented at the university. When looking at differences in integration by ethnic group, findings indicated that while for Black students, a high level of participation in the informal social life of the campus led to better grades, the converse held true for White students and Mexican Americans. White and Mexican American students who reported a high level of participation in the social structure were found to have lower GPAs. The authors hypothesize that perhaps the Black students who indicated a higher level of informal social integration also felt less alienated on campus and therefore more likely to achieve academically. Conversely the White and Mexican American students may have found that a rich social life was an impediment to achieving good grades.

Pascarella & Terenzini (1991) have suggested that only when the informal and formal social environments support and encourage a serious study environment is academic achievement positively affected. In a study of students who were identified as economically and educationally disadvantaged, Fox (1986) found that greater social integration was related to greater attrition rather than persistence. It may be that for students who are facing educational challenges, academic integration emerges as a more crucial component related to persistence than social integration.

To explain some of these differences in the effect of academic and social integration on persistence, Beil, Reisen, Zea and Caplan (1999), looked at the mediating effect that commitment had on persistence. They hypothesized that social and academic integration would not directly affect persistence as some have suggested, but rather, would affect a student's commitment to the institution and to obtaining a degree. This

commitment in turn affects the student's persistence. A self-report questionnaire was distributed to 512 first-year, full time residential students at a mid-sized, private research university. The findings of the study support the hypothesis. Not only was greater commitment to the university during the first semester predictive of persistence in the first year but it was also predictive of retention three years later.

Astin's involvement theory.

Somewhat similar to Tinto's concepts of academic and social integration is Alexander Astin's theory of student involvement (1984) which evolved from a longitudinal study of student dropouts (Astin, 1975). In studying the characteristics and experiences of students who dropped out of colleges and universities, Astin noted that the factors which contributed to persistence (living on campus, joining a fraternity/sorority, participating in extracurricular activities, participating in sports, enrollment in honors programs, involvement in ROTC, partnering in research with a professor, part-time employment on-campus) were rooted in the notion of involvement. Those factors that contributed to students dropping out suggested non-involvement (Astin, 1984, p. 523). Astin sees involvement as a behavioral concept that involves students' psychological and physical time and energy. He defines involvement as "the amount of physical or psychological energy that the student devotes to the academic experience" (p. 519). Within his theory, Astin described 5 basic postulates:

1. Involvement refers to the physical or psychological energy a student devotes to various "objects" which can be general or specific in nature.

2. Involvement takes place along a continuum with different students demonstrating fluctuating levels of involvement with different objects at different times.
3. Involvement can be defined both quantitatively and qualitatively.
4. The amount of gain (in learning or development) associated with various educational pursuits is directly proportional to the quantity and quality of involvement invested by the student.
5. The effectiveness of an institution's policies or programs is directly related to the ability of the policy or program to increase student involvement (p. 519).

Astin's theory is related to how student development takes place and emphasizes the active participation of the student in the learning process. Additionally, Astin places less importance on what educators do and more importance on what students do. Ultimately, however, educators must provide the environment that will enable and encourage students to involve themselves at the university (Astin, 1984).

Whether referred to as involvement, integration, or engagement, the behaviors students demonstrate in relation to their peers, faculty, and academics seem to make a difference in whether they will be retained at the university. While these behaviors make a difference, the environment provided by the university that influences these behaviors is equally important. In relation to residence hall living it is important to determine if the environment that is more frequently being created for students supports or detracts from these important processes of involvement and integration within the institution.

The Importance of the First Year

In the past twenty years, a great deal of attention has been paid to the importance of the first year experience on college campuses. This represents a change from the sink or swim attitude of earlier generations when student attrition was seen mainly as a problem of a student and his/her abilities or lack thereof (Upcraft, Gardner, Barefoot, and Associates, 2005). Part of this change in attitude is due to some rather dismal retention figures. On average, of the students entering 4-year colleges and universities each year for the first time, over one-fourth of them will not return to the same institution their sophomore year. The numbers are even higher for those in 2-year colleges with an average persistence rate of 54.1% (Ishler & Upcraft, 2005, p. 29). Attrition of students is greatest during this period between the freshman to sophomore year and declines with each successive year after. Some studies have even suggested that within this critical first year, it is the first 6 weeks that are most important in influencing whether or not a student will be retained. Levitz and Noel (1989) indicate that the most critical transition period for freshmen occurs during the first two to six weeks. Upcraft and Gardner (1989, p. 10) note that the establishment of close friendships during the first month of enrollment is one of the factors leading to freshman success. Tinto (1993, p. 163) also stresses the importance of the first few weeks of attendance at an institution by noting that this is the time the student is least integrated into the social and academic systems of the university. Therefore the commitment to the university is at a low point which in turn may lead to an easy decision to separate from the institution.

In a study of the long-term effects of the first few weeks of college, students were evaluated regarding their initial experiences with employment, academic adjustment, and

social adjustment. The study was conducted at a Midwest, public university enrolling approximately 3829 freshmen students. During the third week of the semester, all students in the first-year cohort received a survey of which 67 percent were returned and useable. This information was used to predict degree completion within five years. Findings indicated that while employment and initial academic adjustment did not predict degree completion, initial social adjustment was a significant predictor of whether a student would graduate within five years (Woosley, 2003). The author is careful to point out that while this doesn't mean that employment or academic experiences don't eventually affect degree completion, in this study, the initial experiences with these two areas do not predict subsequent graduation. Because the survey was administered during the third week of the first semester, it may be that students had received little feedback regarding their academic work and so had little ability to judge their academic success at this time. The additional finding that social adjustment was a significant predictor of persistence and degree completion supports Tinto's (1993) theory that, while academic integration may play a bigger role in persistence with upperclass students, social adjustment may be the more important component of persistence early on in a student's college career.

These types of studies combined with the high rates of attrition noted by most colleges from the freshmen to sophomore year have resulted in an increased emphasis by colleges and universities on the types of support mechanisms which are in place for students during their first year of attendance. In discussions of the first year, the importance of the residence hall experience is often noted, especially since many universities require their first-year students to live on campus. A variety of efforts have

been made in recent years to tie residential living to the academic experience through residential learning communities, freshman interest groups, and enhanced faculty involvement in the residence halls (Zeller, 2005).

Summary

Residence hall living has long been documented as an important factor in increasing the likelihood of a student's persistence through college as well as other notable gains related to academic and social outcomes. A deeper analysis of these studies indicates that it is likely that living in a residence hall has an indirect effect rather than a direct effect on many of these outcomes. Residence hall living increases the likelihood that students will be involved on campus and integrated into the social and academic systems of the institution which positively affects a variety of other outcomes.

Most studies of residence hall living have not described the type of physical residence hall environment that students live in. One can presume from the dates of many of these studies that most of them were conducted with students who were living in traditional style residence halls characterized by community bathrooms, long corridors, and shared bedrooms. Knowing that the physical environment of a campus or building can affect students' behavior and subsequent interaction with others, it is important to analyze how some of the new physical structures being built in residence halls might change the ways students interact with one another. Little information exists regarding the impact of apartment-style residence halls on the integration and involvement of students on campus. Finally, because the freshmen year is so important in setting the tone for the remainder of a student's experience on campus, it is especially critical to look at the experiences of freshmen. Freshmen living in apartment-style residence halls are a

new population that must be studied in regard to how their environment may affect their behavior and subsequent academic and social integration with the institution.

Chapter 3

Methods

The following chapter describes the methodology and procedures used to measure academic and social integration for first time in college (FTIC) students living in different types of residence hall environments. The chapter discusses the design of the study, instruments used, participants identified, and analyses conducted.

Research Questions

The four research questions guiding this study include:

1. Is there a relationship between the type of residence hall students live in during their first year in college and students' social and academic integration?
2. Is there a relationship between the type of residence hall students live in during their first year in college and their academic achievement after the first and second semester?
3. Is there a relationship between the type of residence hall students live in during their first year in college and their persistence from year one to year two after accounting for pre-college academic performance?
4. Is there a relationship between the type of residence hall students live in during their first year in college and their involvement at the university during the first year?

Variables

Independent variables.

The independent variables in this study included:

1. Type of residence hall
 - a. Traditional style residence hall-- Residence hall with double-loaded corridors, community bathrooms and double occupancy rooms.
 - b. Suite-style residence hall-- Residence hall where four students share two double occupancy bedrooms and bathroom facilities are located between the rooms.
 - c. Apartment-style residence hall-- Residence halls consisting of 4 person apartments each containing 4 single bedrooms, 2 bathrooms, living room, and kitchen.
2. Past academic performance as reflected by scores on the Scholastic Aptitude Tests (SAT).

Dependent variables.

The dependent variables in this study included:

1. Social and academic integration as measured by the five subscales on the revised Institutional Integration Scale.
2. Academic achievement as measured by University of South Florida cumulative grade point average after the Fall 2005 and after the Spring 2006 semester.

3. Persistence from the first to second year as measured by whether students were enrolled at the end of the first week of classes during the following semester (i.e., Fall 2006).
4. Involvement during the first year as measured by the number of hours students indicated they spent on extra-curricular activities during the spring semester.

Participants

Participants for this study were chosen from the population of approximately 2,100 first time in college students living in the residence halls at the University of South Florida during the Fall 2005 and Spring 2006 semesters. The sample studied was drawn from the following residence halls which housed all FTIC students with the exception of student staff members.

Beta Hall—a traditional coed hall consisting of approximately 270 students living in double occupancy rooms with doors opening onto a corridor and community bathrooms located down a hallway.

Cypress Suites B—a suite-style coed hall consisting of approximately 150 students living in double occupancy rooms connected by a bathroom to a second double occupancy room. Each suite door opens up onto a hallway.

Cypress Apartments—an apartment-style coed hall consisting of approximately 290 students living in four-person apartments in which each student has his/her own bedroom and shares a living room, kitchen, and two bathrooms with three other residents in the apartment.

All FTIC students who lived in these three buildings were asked to participate.

The buildings included in the sample each had a Resident Assistant (RA) assigned to a floor or wing. The ratio of RAs to students was similar in all buildings and ranged from 1:30 and 1:40. All RAs had similar responsibilities for programming and community development on their floors. Included in these responsibilities were requirements related to community building, diversity programming, academic initiatives and social programming.

Instrument

The instrument used in this study was a revised version of the Institutional Integration Scale (IIS) originally developed by Pascarella and Terenzini (1980). The IIS was developed to measure social and academic integration based on Tinto's model of college withdrawal (1975). The IIS measures five components of institutional integration including (a) Peer-Group Interactions, (b) Interactions with Faculty, (c) Faculty Concern for Student Development and Teaching, (d) Academic and Intellectual Development, and (e) Institutional and Goal Commitment. The first two subscales, Peer-Group Interactions and Interactions with Faculty have been used to measure social integration while the remaining three subscales have comprised the measures of academic integration. The original instrument contained 30 questions. The instrument was revised by Fox (1984) to convert negatively worded items into positively worded items. In addition, some items were re-written for better comprehension after comparing reliability scores on the original and the revised versions. More recently, French and Oakes (2004) conducted a study of the reliability and validity of the IIS. The instrument as originally written by Pascarella and Terenzini was administered to 773 first year students at a large Midwestern university at the end of the fall 1999 semester. Internal consistency

reliability coefficients, an item analysis and confirmatory factor analyses (CFA) were calculated on the results. Based on these results and on the results found by Fox (1984), the instrument was revised by re-wording negatively written items, adding four questions, and re-wording several items for enhanced readability. The revised version of the IIS was then administered to 1734 students at the same university at the end of the fall 2000 semester and internal consistency reliability coefficients and correlations among subscale scores and between subscale scores and the total scale score were calculated.

Additionally, an item analysis and a CFA were conducted on the revised model. Higher internal consistency reliability, higher item discrimination, and higher correlations among the subscale scores and between the subscale and total scale scores were found with the revised IIS scale. The results of the CFA on the revised scale revealed the two subscales of Interactions with Faculty and Faculty Concern for Student Development and Teaching had correlation indices outside the acceptable range. Therefore a different combination of factors was examined with the subscales of Interactions with Faculty and Faculty Concern with Student Development and Teaching comprising the factor “Faculty,” and the subscales of Peer-Group Interactions, Academic and Intellectual Development, and Institutional and Goal Commitment comprising the second factor of “Student.” Thus, the Faculty factor relates to both social and academic integration with faculty members and the Student factor relates to both social and academic integration with peers and the institution as a whole. Specific questions that comprise each subscale and factor are noted in Appendices 1-A and 1-B. This revision is consistent with theory which suggests that academic and social integration may not operate in isolation from one another but rather, are mutually dependent on one another (Mannan, 2001; Weidman, 1989). This revised

model resulted in better fit according to the CFA (French & Oakes, 2004). Based on these results, the revised scale of the IIS as developed by French and Oakes was used in this study.

The revised IIS instrument consisted of 34 questions answered on a Likert-type scale ranging from 1-5 with 1 being strongly disagree and 5 being strongly agree. In addition to the IIS questions, information on gender, residence hall lived in, length of time lived in the residence hall, and whether the residence hall was their first preference was collected. Finally one additional question was added addressing issues of involvement. It asked students to indicate whether they were active members of different types of campus based organizations.

Reliability and Validity

French and Oakes (2004) computed coefficient alpha scores for the revised IIS scale. The coefficient alpha was .92 with the alphas for the 5 subscales ranging from .76 to .89 indicating moderate to high levels of internal consistency.

Correlations among the subscales were computed by French and Oakes (2004) and are illustrated in Table 1. Correlations among the subscales ranged from .23 to .66 suggesting that the subscales are measuring different, yet related aspects of institutional integration. In Chapter 4, results from Cronbach's Alpha and Pearson Correlation will be reported for the instrument using the data received for this study.

Table 1.

Correlations Among the Subscales of the Institutional Integration Scale

Subscale	# of items	M	(SD)	Correlations			
				1	2	3	4
1. Peer Group Interactions	10	3.99	(.65)				
2. Interactions with Faculty	5	3.33	(.91)	.42			
3. Academic and Intellectual Development	8	3.66	(.78)	.52	.50		
4. Faculty Concern for Student Development and Teaching	5	3.82	(.78)	.41	.66	.49	
5. Institutional and Goal Commitment	6	4.60	(.51)	.45	.23	.44	.31

Procedures

Students from the aforementioned populations received a paper survey instrument from their RA in a floor meeting which took place between April 3 and 23, 2006. The RAs were briefed by the researcher on the importance of the survey and received a script regarding how to communicate the survey request to participants. Students were asked to complete and return the completed surveys to their RA at that time. An envelope was provided for students to seal their surveys in order to protect the confidentiality of their responses. An informed consent form giving the researcher permission to obtain grade point averages and test scores was also provided at this time and students were asked to sign this form and seal in a separate envelope. Those not attending the floor meeting received the surveys under their room doors with instructions for completing and returning both the survey and informed consent. Finally, a follow-up flyer was sent to students thanking them for their participation and encouraging any students who had not returned the survey to do so. An incentive for students to return the survey was an

opportunity to enter into a drawing to win one of three \$100 American Express gift cards provided by the researcher. In previous meetings with Resident Assistant staff, these students indicated that cash cards would be the best incentive to encourage students to complete the survey.

A total of 166 students responded to the survey from a population of 699. Because the response rate was lower than expected, a second attempt at gathering information was attempted and the survey and informed consent information was mailed to students' home addresses in May 2006 if an informed consent form had not been received from the initial administration. An additional 25 surveys were obtained at this time for a total of 191 surveys. Thus the overall rate of return was 27.84%; the rate of return for each residence hall type was 40.15% for traditional housing, 18.84% for suite-style housing and 20.70% for apartment-style housing.

Information regarding grade point averages after both the fall and spring semesters, SAT scores, and enrollment information for Fall 2006 was received from the Office of the Registrar at the University of South Florida in September 2006. Additionally, a determination of persistence was made based on whether students were enrolled after the last day of add/drop during the fall semester 2006.

Analysis of Results

To address Research Question 1, an analysis of variance (ANOVA) was conducted to determine if the independent variable (type of residence hall) resulted in a statistical difference in the dependent variables (scores on each of the five subscales of the IIS). To address Research Question 2, an analysis of covariance (ANCOVA) was conducted to determine if the independent variable (type of residence hall) resulted in differences on

the dependent variable (cumulative USF GPA after the fall semester and after the spring semester) while controlling for SAT scores. To address Research Question 3, a logistical regression analysis was conducted to determine if the independent variable (type of residence hall) resulted in differences in the dependent variable (persistence rates) while controlling for pre-college test scores. Logistic regression is used for dichotomous variables. The analysis involved a measurement of whether the independent variable (type of residence hall) could predict persistence (persister or non-persister). Finally, to address Research Question 4, a chi-square analysis was conducted to determine if the independent variable (type of residence hall) resulted in a statistical difference in the dependent variable (involved/non involved in campus activities). The results of these analyses follow in Chapter 4.

Chapter 4

Analysis of the Data

This study was conducted to assess how first time in college (FTIC) students living in different types of residence hall configurations differed on measures of academic and social integration at a large urban research university. Students in three different residence hall types (traditional, suite-style, and apartment-style) were surveyed using a revised Institutional Integration Scale (IIS) designed to measure aspects of academic and social integration. Additional survey questions assessed student's involvement at the university. Additionally, students completed informed consent forms giving permission for their grades and enrollment status to be obtained from the University of South Florida Registrar's Office. Following are the results of the four research questions guiding this study.

Research Question 1

Is there a relationship between the type of residence hall students live in during their first year in college and students' social and academic integration?

To determine if type of residence hall resulted in differences in academic and social integration, students completed the Institutional Integration Scale. Of the 191 students completing the survey, 22 students indicated they moved into their residence hall after September 15 and were therefore eliminated from the analysis resulting in a total of 169 usable surveys. Mean scores for each subscale were computed by adding the scores on each item of the subscale for a total subscale score for each respondent. Responses

were analyzed using an Analysis of Variance (ANOVA). The means, standard deviations, skewness, and kurtosis of each of the 5 subscales of the Institutional Integration Scale are listed in Tables 2 through 6 broken down according to type of residence halls. Mean scores were obtained by summing the answers on each of the questions comprising that subscale.

Table 2.

Academic and Intellectual Development

	N	M	SD	Skewness	Kurtosis
Traditional hall	91	29.96	5.67	-0.39	0.35
Suite-style hall	22	30.73	4.51	0.12	-0.59
Apartment-style hall	56	30.75	4.74	-0.74	0.78
TOTAL	169				

Note. Eight items represented in subscale.

Table 3.

Peer Group Interactions

	N	M	SD	Skewness	Kurtosis
Traditional hall	91	39.63	6.57	-0.25	-0.73
Suite-style hall	22	39.73	4.72	-1.17	3.65
Apartment-style hall	56	36.92	7.29	-0.96	1.22
TOTAL	169				

Note. Ten items represented in subscale.

Table 4.

Interactions with Faculty

	N	M	SD	Skewness	Kurtosis
Traditional hall	91	16.50	4.99	-0.07	-0.53
Suite-style Hall	22	17.68	4.45	-0.19	-0.38
Apartment-style Hall	56	15.93	5.39	-0.35	-0.57
TOTAL	169				

Note. Five items represented in subscale.

Table 5.

Faculty Concern for Student Development and Teaching

	N	M	SD	Skewness	Kurtosis
Traditional hall	91	18.55	4.41	-0.61	0.67
Suite-style hall	22	19.43	3.19	0.89	0.14
Apartment-style hall	56	18.20	4.03	-0.63	0.69
TOTAL	169				

Note. Five items represented in subscale.

Table 6.

Institutional and Goal Commitment

	N	M	SD	Skewness	Kurtosis
Traditional hall	91	26.91	3.37	-2.04	6.70
Suite-style hall	22	27.38	2.85	-1.51	2.46
Apartment-style hall	56	27.35	3.03	-1.39	2.28
TOTAL	169				

Note. Six items represented in subscale.

There are several assumptions which must be tested before the use of an ANOVA. The first assumption of independence was not assumed to be violated as students' answers on their surveys were a result of their own independent work. The second assumption of normality could be assessed by analyzing the skewness and kurtosis of each of the subscales. The distribution of means for the subscales tended to be slightly negatively skewed with skewness levels ranging from -2.04 to .89 with the highest levels of skewness reported on the subscale of Institutional and Goal Commitment. Results varied whether the distribution was leptokurtic or platykurtic. Ranges for kurtosis fell between -.73 and 6.7. However, most fell within an acceptable range for normalcy with the exception of Institutional and Goal Commitment and Peer Group Interactions (suite-style halls only). However, because each of the groups had at least 20 observations, use of an ANOVA was employed because when the sample size is greater than 20, an ANOVA is considered robust (Stevens, 1999, p. 75).

The third assumption which should be tested prior to conducting an ANOVA is homogeneity of variance. Using Levene’s test for homogeneity of variance, none of the variances of means between the groups on the five subscales were found to vary significantly. The results of the variance test are presented in Table 7.

Table 7.

Levene’s Homogeneity of Variance

Subscale	df	F	<i>p</i>
Academic and intellectual development	2	1.3	.27
Peer group interactions	2	1.72	.18
Interactions with faculty	2	.81	.45
Faculty concern for student development and teaching	2	1.07	.35
Institutional and Goal Commitment	2	.21	.81

Because no assumptions for conducting an ANOVA appeared to be violated, a Cronbach’s alpha was calculated to measure the internal consistency of the instrument used. Results of Cronbach’s alpha indicated moderate (.64) to high (.89) levels of internal consistency on each subscale. These findings were consistent with French & Oakes (2004) findings as reported in Table 8. Only institutional and goal commitment varied noticeably although both were at acceptable levels.

Table 8.

Cronbach's Coefficient Alpha for Subscales of Institutional Integration Scale

Subscale	Alpha	
	French & Oakes	Alpha
	Study	Current Study
Academic and intellectual development	.82	.78
Peer group interactions	.84	.81
Interactions with faculty	.89	.89
Faculty concern for student development and teaching	.88	.89
Institutional and goal commitment	.76	.64

A Pearson Product Moment Correlation was performed on the subscales to measure the relationship between the subscales. The results are indicated in Table 9. With results of the correlation ranging from .30 to .70, it appears the subscales are measuring different, yet related aspects of institutional integration.

Table 9

Pearson Product Moment Correlations Among the Subscales

Subscale	M	(SD)	1	2	3	4
Peer Group Interactions	38.75	6.68				
Interactions with Faculty	16.47	5.06	.45			
Academic and Intellectual Development	30.34	5.2	.35	.42		
Faculty Concern for Student Development and Teaching	18.55	4.14	.44	.70	.54	
Institutional and Goal Commitment	27.12	3.19	.42	.30	.47	.39

Next an ANOVA was performed on each of the subscales to examine if significant differences existed between students living in different types of residence halls. The results of each of the ANOVAs are presented in Tables 10-14. Based on these results no statistically significant differences between students living in traditional, suite, and apartment-style residence halls and levels of academic and social integration as measured by answers on the IIS were observed. Whereas there was a noticeable difference on the subscale of Peer Group Interactions with apartment-style residence halls reporting a lower mean than either traditional or suite-style residents, the results were not statistically significant $F(2,152)=2.93, p=.0562$.

Table 10.

ANOVA Results for Academic and Intellectual Development Subscale

Source	Df	SS	MS	F	<i>p</i>
Hall	2	24.15	12.08	.44	.64
Within Groups	155	4231.96	26.30		
TOTAL	157	4255.22			

Table 11.

ANOVA Results for Peer Group Interaction Subscale

Source	Df	SS	MS	F	<i>p</i>
Hall	2	255.61	127.80	2.93	.06
Within Groups	152	6621.07	43.56		
TOTAL	154	6876.68			

Table 12.

ANOVA Results for Interactions with Faculty Subscale

Source	Df	SS	MS	F	<i>p</i>
Hall	2	48.58	24.29	.95	.39
Within Groups	162	4152.48	25.63		
TOTAL	164	4201.07			

Table 13.

ANOVA Results for Faculty Concern for Student Development and Teaching Subscale

Source	Df	SS	MS	F	<i>p</i>
Hall	2	22.69	11.34	.66	.52
Within Groups	161	2775.92	17.24		
TOTAL	163	2798.61			

Table 14.

ANOVA Results for Institutional and Goal Commitment Subscale

Source	Df	SS	MS	F	<i>p</i>
Hall	2	8.13	4.07	.40	.67
Within Groups	160	1638.65	10.24		
TOTAL	162	1646.79			

Research Question 2

Is there a relationship between the type of residence hall students live in during their first year in college and their academic achievement after the first and second semester?

To determine whether students living in different types of residence halls differed on measures of academic achievement, students were asked to sign an informed consent form giving permission for their Fall and Spring grade point averages as well as their SAT scores to be obtained from the University Registrar's Office. Of the 182 students who completed informed consent forms, 15 students were found to have moved into their

residence hall after September 15, 2006. These 15 students were therefore eliminated from the analysis resulting in 167 students on whom GPA and SAT information was obtained. To determine if there was a relationship between the type of residence halls students lived in and their academic achievement after the fall and spring semesters, an Analysis of Covariance (ANCOVA) was conducted controlling for students' scores on the SAT scores. The means, standard deviations, skewness, and kurtosis for GPAs and SAT scores for each of the 3 groups are provided in Tables 15-17.

Table 15.

Means, Variability and Normality for Fall GPA

	N	M	SD	Skewness	Kurtosis
Traditional	91	2.82	0.83	-1.73	3.77
Suite	22	2.97	0.67	-0.86	0.26
Apartment	54	3.13	0.73	-1.9	4.5
TOTAL	167				

Table 16.

Means, Variability and Normality for Spring GPA

	N	M	SD	Skewness	Kurtosis
Traditional	91	2.89	0.89	-1.48	2.75
Suite	22	2.94	0.63	-0.63	-0.28
Apartment	54	3.04	0.8	-1.29	2.78
TOTAL	167				

Table 17.

Means, Variability and Normality for SAT Scores

	N	M	SD	Skewness	Kurtosis
Traditional	91	1070.66	102.58	-0.36	0.00
Suite	22	1107.73	124.67	-0.16	-0.18
Apartment	54	1141.11	114.13	0.81	0.15
TOTAL	167				

It again appeared that while some data was not normally distributed, since there were more than 20 observations in each cell, the ANCOVA was viewed as robust to non-normality (Stevens, 1999). Additionally, the assumption of homogeneity of regression slopes appeared to be met, therefore it was reasonable to proceed with the ANCOVA. That is, the groups did not appear to differ in SAT scores when examining fall GPA ($F(1, 2)=.57, p=.57$) or when examining spring GPA ($F(1, 2)=.34, p=.71$). This assumption is critical when conducting an ANCOVA and is not robust to violations. In order to statistically control for a covariate, the covariate must have the same relationship in each group; if the nature of the relationship varies between groups the covariate cannot be included in an ANCOVA.

Results of the ANCOVA indicated that there was no statistical difference in fall or spring GPA amongst the three halls after adjusting for incoming SAT scores. The ANCOVA results are listed in Tables 17 and 18. The adjusted means after accounting for SAT Scores are shown in Table 19

Table 18.

ANCOVA Results for Fall GPA

Source	Df	SS	MS	F	<i>p</i>
Hall	3	4.64	1.55	2.57	.06
Within Groups	163	98.14	.60		
TOTAL	166	102.78			

Table 19.

ANCOVA Results for Spring GPA

Source	Df	SS	MS	F	<i>p</i>
Hall	3	3.63	1.21	2	.11
Within Groups	163	98.60	.60		
TOTAL	166	192,23			

Table 20.

Mean GPAs adjusted for SAT Scores

	Fall GPA	Spring GPA
Traditional style hall	2.84	2.93
Suite-style hall	2.97	2.93
Apartment-style hall	3.03	2.98

Research Question 3

Is there a relationship between the type of residence hall students live in during their first year in college and their persistence from year one to year two after accounting for pre-college academic performance?

To determine whether students living in different types of residence halls differed in persistence from year one to year two, students were asked to sign an informed consent form giving permission for their enrollment status for Fall 2006 to be obtained from the University Registrar's Office. Of the 182 students who completed informed consent forms, 15 students were found to have moved into their residence hall after September 15, 2006. These 15 students were therefore eliminated from the analysis resulting in 167 students on whom enrollment information was obtained. A logistic regression was performed to determine if a difference existed in persistence from the first to second year, depending on the type of residence hall students' resided in during their first year,. Listed in Table 21 are the numbers of students enrolled and not enrolled in each of the three residence halls during the fall semester of the second year.

Table 21.

Students Enrolled/Not Enrolled in Fall 2006

	N	Enrolled	Not Enrolled
Traditional	91	82	9
Suite-style	22	20	2
Apartment-style	54	50	4
TOTAL	167	152	15

Whereas the assumption of independence is still met in this measure, there are no assumptions of normality or homogeneity of variance that must be tested in a logistic regression. Results of the logistic regression indicated there was no statistical difference in persistence for students living in different types of residence halls ($\chi^2(1, 167) = .1373, p=.71$)

Research Question 4

Is there a relationship between the type of residence hall students live in during their first year in college and their involvement at the university during the first year?

To determine if students living in different types of residence halls differed in their involvement at the university, students were asked to indicate on the survey instrument how many hours per week they were involved in a variety of types of organizations. Because some students chose to indicate their involvement with a check mark rather than with an indication of the hours spent in the activity, those who indicated any involvement were coded as “involved”, while students without any hours indicated or involvement indicated were coded as “non-involved”. Of the 191 surveys returned, 22 students indicated that they moved into their residence hall after September 15 and were thus eliminated from the analysis, resulting in 169 usable responses. A chi-square analysis was conducted to determine if living in different types of residence halls resulted in differences in involvement at the university. Table 22 shows the raw numbers for students who indicated they were involved or not-involved in each of the three residence halls.

Table 22.

Students Involved/Not Involved

	N	Involved	Not Involved
Traditional	91	51	40
Suite-style	22	15	7
Apartment-style	56	28	28
TOTAL	169	94	75

Results of the chi-square analysis indicated that there was no statistical difference in involvement for students living in different types of residence halls (χ^2 (2,169) =2.1296, $p=.34$).

Chapter 5

Conclusions and Recommendations

Summary of Findings

The goal of this research was to determine if any differences existed in a variety of outcomes between students living in traditional, suite-style, and apartment-style residence halls during their first year. The dependent variables for this study included academic and social integration as measured by the revised Institutional Integration Scale; grade point averages after the fall and spring semester after controlling for incoming SAT scores; persistence from year one to year two; and involvement in extra-curricular activities at the university. The study was conducted in three different residence halls comprised of first-year students at the University of South Florida. This chapter will explore in-depth the findings of each research question and discuss the research findings, limitations, and implications.

Research Question 1.

Is there a relationship between the type of residence hall students live in during their first year in college and students' social and academic integration?

To answer this research question, students completed the Institutional Integration Scale (IIS) measuring five aspects of social and academic integration. The scale is broken down into five subscales including Academic and Intellectual Development, Peer Group Interactions, Interactions with Faculty, Faculty Concern for Student Development and Teaching, and Institutional and Goal Commitment. After completing an analysis of

variance for each of these subscales, no significant differences were found between students living in traditional, suite, or apartment-style housing on any of the subscales.

Many of the gains commonly associated with residence hall living (e.g; higher rates of persistence, increased involvement) are thought to come from the increased interaction and sense of community derived from living in residence halls as compared to off-campus housing (Astin, 1975; Blimling, 1993b; Stodt, 1987). Given this, one might hypothesize that among first-year students living on-campus, the greatest benefits would be seen among students living in housing structures that maximize opportunities for increased interaction and development of community. Because apartment-style residence halls tend to focus more on privacy and amenities rather than providing physical spaces for interaction, it is reasonable to expect that students living in traditional or suite-style halls might benefit more than those in apartment-style halls. Therefore, the non-significant differences observed for this research question are somewhat surprising, especially on the sub-scales measuring social integration with other students. While one of the subscales, Peer Group Interactions did approach the level of statistical significance ($p = .0562$), the observed differences were not large enough to conclude confidently that this finding didn't occur due to chance. Possibly if the sample size were larger or the rate of survey returns were greater, there would have been a greater chance of finding a significant difference on this subscale.

Research Question 2.

Is there a relationship between the type of residence hall students live in during their first year in college and their academic achievement after the first and second semester?

To analyze this research question, an Analysis of Covariance was computed on students' fall and spring GPAs using students' incoming SAT score as a covariate. Results of the ANCOVA revealed no significant difference between students' academic achievement measured by first and second semester GPA when the possible influence of academic ability measured by SAT scores was controlled for statistically by the ANCOVA procedure.

Previous literature suggested that students living on campus did not differ significantly in academic achievement as defined by grade point average from their peers living off campus when pre-college academic performance was taken into consideration (Blimling, 1989). The present study is the first of its kind to look specifically at possible differences in academic performance among students living in different physical types of on-campus residence halls, therefore this was an important question to examine and the finding of non-significant group differences is noteworthy.

The results of this analysis point to a question that may be appropriate for further research. In looking closely at the findings it is interesting to note that students living in traditional housing had noticeably lower fall GPAs, spring GPAs, and SAT scores than those living in suite or apartment-style housing. However, the students in traditional housing saw a slight rise in their mean GPAs from the fall to the spring semester while the suite and apartment-style residents saw a slight decline in their mean GPAs from the fall to the spring semester. Further research should be conducted to examine whether differences in GPAs from the fall to spring term are influenced by the type of residence halls students reside in during their freshmen year. While this difference in GPAs between the fall and spring semesters may simply be a result of regression towards the

mean, if the difference is statistically significant, it may also suggest that there is something about the living environment that either supports or detracts from students improving their academic performance over time.

Research Question 3

Is there a relationship between the type of residence hall students live in during their first year in college and their persistence from year one to year two after accounting for pre-college academic performance?

A logistic regression was run to determine if students who lived in different types of residence halls persisted at different rates from year one to year two. The published literature consistently suggests that students living on-campus persist at higher rates than students living off-campus (Astin, 1975, 1993; Pascarella & Terenzini, 1991, 2005). These investigators have suggested that these higher persistent rates are due to the increased interaction and community found in the residence halls (Astin, 1975, 1993). While it seems reasonable to anticipate that students living in residence halls offering greater interaction and community would persist at higher rates than those offering less, in this study no systematic differences in student persistence were observed among the three different types of residence halls.

The first interesting item to note in this result is that the reported persistence rates for students in each of the three halls is higher than the overall persistence rate from year one to year two for all first time in college students living in the residence halls. For Fall 2006, the persistence rate for students living in the residence halls their first year from year one to year two was 80.6%. In the last 4 years the range has been between 80.6% to 83.6%. As noted in Table 23, persistence rate for the sample ranged from a low of

90.11% for traditional style residents to 92.59% for apartment-style residents. This difference may suggest that students who were willing to participate in this study were more likely to be ones who would persist at the university than students who did not attend the hall meeting in which the survey was distributed or chose not to participate.

Table 23.

Persistence Rates from Fall 2005 to Fall 2006 for Students in Three Types of Residence Halls

	N	Enrolled	Not Enrolled	% enrolled
Traditional	91	82	9	90.11%
Suite-style	22	20	2	90.91%
Apartment-style	54	50	4	92.59%
TOTAL	167	152	15	91.02%

Second, it bears mentioning that a higher percentage of students not enrolled for the Fall 2006 semester had GPAs below 2.0 for the fall and spring semesters when compared to students who returned to the university for Fall 2006. This might suggest that students with freshmen year GPAs close to the “C” level are less likely to return for their sophomore year than students whose freshmen year GPAs were at “B” level or above. Whether this pattern holds similarly true for students residing in other residence halls or in off-campus housing during their freshman year was not assessed in the present investigation. Tables 24 & 25 illustrate the differences in GPAs among students enrolled or not enrolled for Fall 2006.

Table 24

Differences in GPAs of Students Enrolled/Not Enrolled for Fall 2006

	N	Mean Fall 2005 GPA	Mean Spring 2006 GPA
Students Enrolled for Fall 2006	152	3.01	3.03
Students Not Enrolled for Fall 2006	15	2.16	2.07

Table 25

Percentage of students with GPAs below 2.0 for Fall 2006

	N	% of students below 2.0 for Fall 2005	% of students below 2.0 for Spring 2006
Students Enrolled for Fall 2006	152	8.6%	9.2%
Students Not Enrolled for Fall 2006	15	33.3%	46.7%

Research Question 4.

Is there a relationship between the type of residence hall students live in during their first year in college and their involvement at the university during the first year?

To determine if students living in different types of residence halls differed in their involvement at the university, students were asked to indicate on the survey instrument how many hours per week they were involved in a variety of types of organizations.

Students who indicated at least one hour of involvement per week were coded as “involved”, while students listing less than one hour per week were coded as “non-involved”. A chi-square analysis was computed to determine if a difference existed in involvement for students living in the three different types of residence halls. Results of the chi-square analysis indicated that there was no significant difference in involvement based on the type of residence hall in which students resided.

Previous literature has indicated that students living on-campus are more likely to become involved than their peers living off-campus and this is thought to be true because the on-campus environment encourages students connecting with one another and becoming more involved with their institution (Astin, 1984). While this general finding was not tested directly in this study, it was anticipated that among residence hall students, those living in halls where there were greater opportunities for interaction with one’s peers and the development of a closer sense of community might become more involved in campus activities.

It should be noted that while the measure of involvement did not differ significantly among the students in the three different types of residence halls, there is a practical difference that is apparent with only half of the students in apartment-style halls reporting being involved in campus activities and over two-thirds of those in suite-style halls reporting involvement. It is likely that the relatively small sample size in this survey made it difficult to observe a statistically significant difference in this analysis.

Were this study to be replicated, a more comprehensive measure of student involvement may need to be utilized. For instance, of those students who indicated they were “involved” at the university, there may in fact be differences in levels of

involvement among students in the three types of residence halls which may be important to explore.

To summarize, this study looked at differences in social and academic integration, grade point averages, persistence, and involvement for students living in three different types of residence halls during their freshmen year. While anecdotally it seems that some types of residence halls offer more interaction and potential for community building than others, which might then lead to differences in the above outcomes for students, the findings in this study did not reveal any significant differences. While these types of studies need to be repeated, this is important information for housing professionals who may be making building and renovation plans or struggling with how to staff an apartment-style residence hall. If these findings were to be replicated, it would suggest that students' success at the university (as measured by the outcomes utilized in this study) may not be influenced by their living environment on campus. This could open up options for housing professionals to utilize buildings differently or to build buildings that best meet customer demands even if they seem to not provide the type of interaction and community often sought in residence hall design.

Limitations

Several authors including Campbell and Stanley (1963), Smith and Glass (1987), and Onwuegbuzie (2003) have identified threats to internal and external validity. Among the threats which may be considered limitations in the present study are history, differential selection of participants, implementation bias, instrumentation, and population validity.

History refers to the events or experiences that are unrelated to treatment, but may occur during the course of a study to influence the subject(s) (Onwuegbuzie, 2003).

Students living in the residence halls certainly have a wide variety of experiences over the course of a year. It is possible that students or groups of students had experiences that influenced their social or academic integration or their ability to achieve academically that had nothing to do with living in a particular type of residence hall.

Differential selection of participants refers to the possibility that there may be substantive differences between the comparison groups prior to the intervention or treatment (Onwuegbuzie, 2003). When applying to live on campus, students have the opportunity to rank order their preferences for the type of housing in which they wish to live. This study did not look at whether there were certain predisposing characteristics in the type of students who might choose to live in traditional, suite, or apartment-style housing that might contribute to the outcome variables in some way. For instance, students choosing to live in apartment-style halls which offer more privacy might be less inclined from the outset to be involved in campus organizations as opposed to those choosing to live in suite or traditional style halls which offer greater potential for interaction. While two of the research questions took into account some sort of pre-college measure (SAT scores), the other two questions regarding academic and social integration and involvement did not. Additionally, there are cost differences between the three type of residence halls included in this study which might pre-dispose certain students towards a preference for one type of housing over another.

Implementation bias refers to the possibility that those implementing the treatment or intervention are not consistent with the protocol required. The administration

of this survey was dependent on Resident Assistants in each hall carrying out the procedures as directed. Although attempts were made to provide clear, consistent and complete instructions to RAs for distributing and collecting the survey, the fact that the survey was administered by 27 different student leaders likely led to some of the differences in both return rate as well as the time and energy students gave to completing the task.

Population validity is a threat to external validity and refers to the extent to which results are generalizable from the sample studied to the larger population. A major limitation in this study was its relatively small sample size. Because fewer surveys and informed consents than expected were returned, the generalizability of the results may come into question. Because students who had been identified as part of the sample were not required to participate, the students who returned their surveys and gave permission for their grades and enrollment status to be obtained may have differed in some way from those who chose not to participate. It is possible that those students who typically attend hall meetings (where the study was distributed) and willing to participate in the study may be more pre-disposed to being involved, performing well academically and persisting at the university. At some level the actual act of coming to a hall meeting may be considered “involvement”.

Finally, although the instrument used showed moderate to high levels of reliability, the instrument has not yet been widely used. Therefore, it is possible that the instrument did not adequately assess the concepts of social and academic integration and therefore represents a threat to internal validity.

Additionally, an assumption made throughout this study is that traditional and suite-style residence halls offer greater opportunity for interaction and the development of a sense of community than apartment-style residence halls. While the physical structure of these buildings and the ways in which students have opportunities to see one another and therefore interact makes this assumption plausible, the physical structure of the residence hall is only one aspect of what contributes towards the establishment of community. Staff are put in place in each of the residence halls to help create this sense of community and certainly their level of effectiveness in doing so may influence the level or way in which interaction and community are experienced by the residents. For instance if the apartment-style residence hall has excellent staff who work hard to encourage students to come out of their apartments, meet one another, attend programs, and interact, the students' experiences may be more like what we would expect to find in a traditional style hall. Conversely if staff in a traditional or suite-style hall are not promoting interaction and the development of community, students may find themselves interacting less than expected and consequently not reaping the benefits that a residence hall experience can provide. This study did not address nor assess the staff effectiveness in addressing these issues and this may be an area for which further researchers might seek to control.

Implications for Practice

Based on the non-significant findings obtained in this study, it would be easy to assume that students living in traditional, suite, or apartment-style residence halls have similar residence hall experiences or do not differ in a measurable way. However, there

are some differences noted in the study which, though not meeting the a priori level of statistical significance, do have some practical significance and should be considered.

Looking simply at the percentage differences reported on page 64, it does appear that students living in apartment-style halls have less involvement and less peer interaction than their fellow students who reside in either traditional or suite-style halls. While this could simply be due to chance, it does suggest that further research with a larger sample size would be helpful. If students living in apartment-style buildings do have less involvement and interact less than their peers, it may or may not be due to the type of hall they live in. However, the finding does suggest that care should be taken when assigning staff and determining responsibilities in these types of halls. Many apartment-style facilities are given fewer staff members than traditional halls, with the assumption that staff are less “needed” in these types of facilities. However, if in fact students interact less and are less involved, this may suggest that more staff are needed in these buildings to help students build stronger connections to their institution and their peers. It also suggests that the type of staff needed in these buildings are those most comfortable knocking on doors and being more proactively “intrusive.” These staff may be working with the residents who are the hardest to reach and need to feel comfortable when reaching out to these students. An area for further research may be related to the quality or type of staff member who works most effectively in an apartment-style building.

Another interesting finding, though unrelated to the specific research questions in this study, has to do with residents’ feelings on the impact their experience in the residence hall has had on their academics, involvement, and overall experience at the

university. These questions were asked as part of the demographic information obtained in the survey, and were not specific questions included as part of the Institutional Integration Scale. The mean scores for the 3 groups on these questions are listed in the table below:

Table 26

Residence Hall Impact on Academics, Involvement and Overall Experience

	Traditional	Suite-style	Apartment-style
My experience in the residence hall has had a positive impact on my academic experience	3.84	4.36	3.63
My experience in the residence hall has had a positive impact on my involvement at the University	3.89	4.09	3.29
My experience in the residence hall has had a positive impact on my overall experience at the University	3.97	4.41	3.80

As can be seen, apartment-style residents were least likely to report that their residence hall experience had a positive impact in any of the three areas. This seems to be in keeping with the findings that residence hall students living in apartment-style halls were less satisfied with their residence hall experience (Educational Benchmarking Institute, 2005). Whether these findings are influenced by the design of the hall, the

types of staff traditionally assigned to the different types of halls, or the type of student that preferences the different types of halls are all possible areas for further research.

Finally, it is important to consider that perhaps the research that was done on residence hall living in the 1970s and 1980s may no longer be applicable to this generation of students. Prior research has suggested that students living on-campus persist and are involved at higher rates than students living off campus and that this difference can be attributed to the increased interaction and community students experience in residence hall living (Astin, 1977; Chickering, 1974; Herndon, 1984; Scott, 1975). From that one might conclude that students living in residence halls which seem to provide greater opportunities for interaction may persist and be involved at greater rates than those living in residence halls that focus less on interaction and more on privacy. However, because no significant differences were found in this current study one might question whether the same type of study looking at on-campus and off-campus students would yield the same type of results. Certainly an update of this previous research would be an important contribution to the literature.

Recommendations for Future Research

This study is one of the first to look at the differences in academic and social integration among first year students living in traditional, suite, or apartment-style residence halls. Due to the small sample size, modest rate of survey returns, as well as the fact that the sample came from one university, care should be taking in generalizing these results to other universities or residence hall programs.

Suggestions for further research in previous sections of this chapter have included (a) investigations regarding changes in grade point averages from fall to spring for

residence hall students, (b) using a more comprehensive measure of involvement, (c) obtaining a larger sample size, and (d) studying the qualities or types of staff that are most effective in different types of housing facilities and (e) investigating whether today's college student seems to benefit in the same ways from living on campus as research has suggested students in previous generations benefited. Additional suggestions for areas of research are as follows.

Were this study to be replicated, it might be best to employ an on-line survey methodology to ensure that all students received the same message about completing the survey and informed consent. Because students are probably more likely to check their e-mail on a daily basis than attend a hall meeting, it may be a better way to recruit volunteers to participate in the survey.

Additionally, researchers replicating this study may wish to consider the type of incentives offered to encourage students to participate in the survey. Based on the relatively low return rate, it seems that the incentives offered were not sufficient to encourage students to participate in the survey. Perhaps smaller but greater numbers of incentives would encourage students more to participate.

Prior research has shown that students living in apartment-style residence are often less satisfied than their peers in traditional and suite-style residence halls (Educational Benchmarking Institute, 2005). Further study needs to be done to look at the connection between decreased satisfaction and other outcome variables to see if this is a concern that needs to be addressed.

Additionally, this study did not examine if these results differed based on student gender or ethnic background. A replication of this study with an analysis of either of these two variables could prove insightful and valuable.

It can be further noted that some of the issues of integration are difficult to quantify. Qualitative research that explores students' thoughts, feelings, and experiences about their residence hall and its impact upon their university experience could certainly provide richer and more powerful data to determine how students living in these different types of residence halls may differ. Additionally, the instrument used in this study may need some revision. Although reliability seemed consistent with previous studies, there may be some questions that might use outdated language or concepts. For instance one question asks students about their satisfaction with their dating relationships. It was noted that many students chose not to answer this question or write in comments. It may be worth examining whether the term or concept of "dating" is relevant to this generation of students.

Another study looking at these differences may take into account different pre-college characteristics than those represented in this study. For instance, there are cost differences in the three types of residence halls identified in this study. For that reason students of differing socio-economic backgrounds might self select into different types of housing. Whether or not there are variations in how students from different socio-economic backgrounds engage with the university may be an important question to examine and an important factor for which to control.

Finally, the issue of whether those students who are willing to participate in the research may be more likely to be involved, perform well academically and persist at the

university should be looked at. While it is difficult to do research on some of these issues without the active participation of students, the questions of persistence is one that probably could be looked at for a whole residence hall since enrollment at the university is typically public information and therefore not something you would need student's permission to seek out. By comparing all of the residents of the given residence halls, a more accurate picture of whether there is any difference in the level of persistence given the type of hall in which students reside can be obtained.

Summary

For many years, studies have been conducted comparing students living on-campus with those living off-campus and have shown that students living on-campus have higher levels of involvement and persistence at the university. Other studies have looked at the characteristics of on-campus living and found that the increased opportunities for interaction and community have contributed to these findings. No prior studies, however, have attempted to examine possible differences in outcomes for students living in different types of on-campus housing, some which are perceived to provide greater interaction and opportunities for community building than others.

Based on this information, this study sought to explore differences in outcomes for first-year students living in three different types of residence halls including traditional, suite-style, and apartment-style halls. Additional information which supported this research was the lower satisfaction levels of students living in apartment-style housing compared to students living in more traditional style housing.

After conducting this research and exploring differences in social and academic integration, grade point averages, persistence, and involvement, it was found that there

were no significant differences in these areas amongst first year students in three different types of residence halls. Despite there being several limitations to the study, this is important information for housing professionals who often assume that first-year students should live in buildings that offer the highest levels of interaction. This study is the first of its kind and therefore should be replicated with a larger sample size as well as by incorporating some of the previous suggestions for further research.

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Appendices

Appendix 1A

IIS Factor “Student”

Academic and Intellectual Development

- Most of my courses have been intellectually stimulating
- I am satisfied with my academic experience at this University.
- I am more likely to attend a cultural event (e.g. a concert, lecture, or art show) now compared to a few months ago.
- I am satisfied with the extent of my intellectual development
- In addition to required reading assignments, I read many of the recommended books in my courses.
- This year my academic experience has positively influenced my intellectual growth and interest in ideas
- My interest in ideas and intellectual matters has increased since starting classes.
- I have performed academically as well as I anticipated.

Peer-Group Interactions

- My interpersonal relationships with students have positively influenced my intellectual growth and interest in ideas.
- I have developed close personal relationships with other students.
- The student friendships I have developed have been personally satisfying.
- My personal relationships with other students have positively influenced my personal growth, values, and attitudes.
- It has been easy for me to meet and make friends with students.
- I am satisfied with my dating relationships.
- Many students I know would be willing to listen and help me if I had a personal problem.
- Most students at this University have values and attitudes similar to mine.
- I am satisfied with the opportunities to participate in organized extra curricular activities at this University.
- I am happy with my living/residence arrangement.

Institutional and Goal Commitments

- I have an idea about what I want to major in.
- Getting good grades is important to me.
- It is important for me to graduate from college.
- It is important for me to graduate from this University.
- I am confident that I made the right decision in choosing to attend this University.
- I will most likely register at this University next fall.

Appendix 1B

IIS Factor “Faculty”

Interactions with Faculty

- I am satisfied with my opportunities to meet and interact informally with faculty members
- Many faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students.
- I have developed a close, personal relationship with at least one faculty member.
- My non-classroom interactions with faculty members have positively influenced my intellectual growth and interest in ideas.
- My non-classroom interactions with faculty members have positively influenced my personal growth values and attitudes.
- My non-classroom interactions with faculty members have positively influenced my career goals and aspirations.

Faculty concern for Student Development and Teaching

- Many of the faculty members I have had contact with are genuinely outstanding or superior teachers.
- Many faculty members I have had contact with are genuinely interested in students.
- Many faculty members I have had contact with are genuinely interested in teaching.
- Many faculty members I have had contact with are interested in helping students grow in more than just academic areas.

In addition to required reading assignments, I read many of the recommended books in my courses.	5	4	3	2	1
My interest in ideas and intellectual matters has increased since starting classes.	5	4	3	2	1
I have an idea about what I want to major in.	5	4	3	2	1
This year my academic experience has positively influenced my <i>intellectual growth and interest in ideas</i> .	5	4	3	2	1

Please see reverse

	Strongly Agree	Somewhat Agree	Not Sure	Somewhat Disagree	Strongly Disagree
So Far at USF:					
Getting good grades is important to me.	5	4	3	2	1
I have performed academically as well as I anticipated.	5	4	3	2	1
My interpersonal relationships with students have positively influenced my <i>intellectual growth and interest in ideas</i> .	5	4	3	2	1
I have developed close personal relationships with other students.	5	4	3	2	1
The student friendships I have developed have been personally satisfying.	5	4	3	2	1
My personal relationships with other students have positively influenced my <i>personal growth, values, and attitudes</i> .	5	4	3	2	1
It has been easy for me to meet and make friends with students.	5	4	3	2	1
I am satisfied with my dating relationships.	5	4	3	2	1
Many students I know would be willing to listen and help me if I had a personal problem.	5	4	3	2	1
Most students at this University have values and attitudes similar to mine.	5	4	3	2	1
I am satisfied with the opportunities to participate in organized extra curricular activities at this University.	5	4	3	2	1
I am happy with my living/residence arrangement.	5	4	3	2	1
I am satisfied with my opportunities to meet and interact informally with faculty members.	5	4	3	2	1
Many faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students.	5	4	3	2	1
I have developed a close, personal relationship with at least one faculty member.	5	4	3	2	1
My non-classroom interactions with faculty members have positively influenced my <i>intellectual growth and interest in ideas</i> .	5	4	3	2	1
My non-classroom interactions with faculty members have positively influenced my <i>personal growth, values, and attitudes</i> .	5	4	3	2	1
My non-classroom interactions with faculty members have positively influenced my <i>career goals and aspirations</i> .	5	4	3	2	1
Many faculty members I have had contact with are genuinely outstanding or superior teachers.	5	4	3	2	1
Many faculty members I have had contact with are genuinely interested in <i>students</i> .	5	4	3	2	1

Many faculty members I have had contact with are genuinely interested in <i>teaching</i> .	5	4	3	2	1
Many faculty members I have had contact with are interested in helping students grow in more than just academic areas.	5	4	3	2	1
It is important to me to graduate from college.	5	4	3	2	1
It is important to me to graduate from this University.	5	4	3	2	1
I am confident that I made the right decision in choosing to attend this University.	5	4	3	2	1
I will most likely register at this University next fall.	5	4	3	2	1
My experience in the residence hall has had a positive impact on my academic experience.	5	4	3	2	1
My experience in the residence hall has had a positive impact on my involvement at the University.	5	4	3	2	1
My experience in the residence hall has had a positive impact on my overall experience at the University.	5	4	3	2	1

About the Author

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