This is to certify that the
dissertation entitled

A QUALITATIVE INVESTIGATION OF OUT-OF-CLASS STUDENT-FACULTY INTERACTION IN AN UNDERGRADUATE RESIDENTIAL LEARNING COMMUNITY

presented by

PHILIP E. STRONG

has been accepted towards fulfillment
of the requirements for the

Ph.D. degree in Higher, Adult, and Lifelong Education

Kirsten A. Nu
Major Professor's Signature

4/20/2007
Date

A QUALITATIVE INVESTIGATION OF OUT-OF-CLASS STUDENT-FACULTY INTERACTON IN AN UNDERGRADUATE RESIDENTIAL LEARNING COMMUNITY

By

Philip E. Strong

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Educational Administration

2007

ABSTRACT

A QUALITATIVE INVESTIGATION OF OUT-OF-CLASS STUDENT-FACULTY INTERACTON IN AN UNDERGRADUATE RESIDENTIAL LEARNING COMMUNITY

By

Philip E. Strong

The central question of this study was to investigate the nature of and outcomes associated with out-of-class student-faculty interaction in a residential learning community (RLC). There exists a strong national movement in residential higher education for the development of residential learning communities. Using qualitative methodology, I interviewed 14 second-year undergraduate students who were pursuing a bachelor degree in the sciences. Ten of the 14 students were members of the same RLC.

From the analysis of the interview data, I found that the students interacted with their faculty outside of class at two distinct levels – rudimentary and heightened – as interpreted through four primary variables – frequency of interactions, quality of the interaction experiences, the intensity of interactions, and location of interactions. Students reported significant impacts on their academic, social, and personal development with the specific outcomes of increased student learning, motivation, self-worth, effort, and comfort level. Students also identified their perceptions of faculty members' roles at the institution as well as preferred characteristics of a 'good' faculty member. The residential learning community at the center of this study, and other institutionally developed programs, were shown to have positive impacts on students in their academic, personal, and social development as well as their access to heightened-level interactions with faculty.

ACKNOWLEDGEMENTS

I wish to acknowledge my wife Katie Strong for sixteen years of support in both my educational career development. I thank my parents Ernest Strong and Barbara Strong long-time educators for instilling in me a value set that includes achievement, lifelong education, and cherishing individual differences and rights. The cohort of students, faculty, and administrators who comprise the HALE program have provided me a tremendous means for completing this educational program and research project. I graciously thank the Graduate Recruiting Doctoral Fellowship, Clyde M. Campbell Endowed Fellowship, and the Academic Specialists Support Program for their financial investments in my education.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE – INTRODUCTION TO THE STUDY

In this study I investigate the *nature of* and *outcomes associated* with out-of-class student-faculty interaction in an undergraduate residential learning community. My decision to conduct this study was inspired by significant research that illuminated the positive outcomes of living on campus (Pascarella & Terenzini, 1991, 2005), the significance of out-of-class student-faculty interaction on undergraduate students (Lamport, 1993), and the emergence of the residential learning community movement within higher education in the United States (Fain, 2006; Geraghty, 1996; Weinberg, 2005).

Pascarella and Terenzini (1991) conducted a meta-analysis of cumulative published research on college students including a significant analysis of the impact of living on campus. Fifteen years later, they published a similar analysis of the next decade of research on college students and in both instances they found that living on campus had a positive effect on student success and satisfaction issues including retention, persistence, degree attainment, value development, autonomy, and self-concept (Pascarella & Terenzini, 1991, 2005). Lamport (1993) developed an extensive literature review on informal or out-of-class student faculty interaction and the impact on college students and found that faculty have been shown to have a significant positive impact on student success outcomes including academic achievement, persistence, degree completion, career development, and other measures of human and student development. There is also a major movement in higher education to develop residential learning communities with the primary goals of increased student retention and student satisfaction by developing programs that increase opportunities for student-faculty

interaction (Fain, 2006; Murray State University, 2005; The Trustees of Princeton University, 2005; Weinberg, 2005). These individual areas have been studied and documented, yet there has been no published work to date investigating the nature of out-of-class student-faculty interaction in a residential learning community and its impact on undergraduate students. My study will address this particular void in the published research on college students.

The positive outcomes for undergraduate students living on campus are clear, significant, and substantial (Pascarella & Terenzini, 1991, 2005). Students who lived on campus in structured residential living environments had significantly greater retention, persistence, and degree attainment than their peers living off campus (Pascarella & Terenzini, 1991, 2005). Additionally, students living on campus had greater development of aesthetic, cultural, and intellectual values; increases in broader sociopolitical attitudes and values; increases in their self-concept; increases in secularism; and significant increases in intellectual orientation and the development of autonomy, independence, a greater internal locus of control or efficacy, and moral development (Pascarella & Terenzini, 1991, 2005; Schroeder & Mable, 1994).

There is also clear, significant, and substantial evidence supporting the positive outcomes of student-faculty interaction within the college setting (Lamport, 1993; Pascarella & Terenzini, 1991, 2005; Umbach & Wawrzynski, 2005). Faculty, through student-faculty interactions, have been shown to provide a significant positive impact on student academic achievement, cognitive and affective development, persistence and degree completion, overall satisfaction with college, and development of career goals and aspirations (Lamport, 1993; Pascarella & Terenzini, 1991, 2005; Tinto, 1998).

College and university administrators across the United States are investing significant resources to develop residential learning communities (RLCs) (Brower, Golde, & Allen, 2003; Evergreen State College, 2005; Fain, 2006; Indiana University, 2005; Metropolitan Community Colleges, 2004; Murray State University, 2005; The Trustees of Princeton University, 2005; Weinberg, 2005). These RLCs were designed to create a smaller concentrated communities within the institution by incorporating the students' residence into a structured or formal learning environment, and designed to align faculty with a smaller subset of students in a community to increase the level of interaction among students and faculty (Inkelas & Weisman, 2003; McDonald, Brown, & Littleton, 1999; Schroeder & Hurst, 1996; Smith, 2001; Stassen, 2003; Talburt & Boyles, 2003). From a historical perspective, the practice of students living and learning on campus has been an integral component of higher education in the United States for well over 350 years and continues to be a model especially among research-intensive four-year institutions and traditional liberal arts colleges (Altbach, Berdahl, & Gumport, 1999; Brubacher & Rudy, 1976; Weinberg, 2005). This current movement back toward residential learning communities reflects a fundamental shift in practice for many major research universities (Boyer Commission on Educating Undergraduates in the Research University, 1998).

As outlined in a review of the relevant literature forthcoming in chapter two of this document, these studies have provided substantial proof of the positive impacts of on-campus residence and student-faculty interaction on undergraduate college students (Lamport, 1993; Pascarella & Terenzini, 1991, 2005). However, with the rapid development of these RLCs, there has been limited study of out-of-class student-faculty

interaction within a residential learning community. Furthermore, there is a distinctive gap in the qualitative understanding of the *role* of the residential learning community environment with regard to out-of-class student-faculty interaction, the *nature* of the interactions, and the specific *outcomes* for the students attributed to these interactions. Therefore, I designed this study to examine the out-of-class student-faculty interaction experiences of undergraduate students in a residential learning community environment in a single institution as interpreted through a series of interviews and interactions with students within a single RLC.

Research Questions

The predominant questions guiding this study are:

1. What is the *nature* of out-of-class student-faculty interaction in a residential learning community?
2. What are the *outcomes* associated with out-of-class student-faculty interaction in a residential learning community?

I addressed these questions through qualitative methods grounded in individual responsive interviews (Rubin & Rubin, 2005) which I explain in detail in chapter three.

Theoretical Framework

According to Bronfenbrenner (1986) the external environment and context are essential elements of child development within a family system. People and their environment are interdependent, the environment is resource rich, humans make decisions that have impact on the environment, and the environment has influence on human decisions (Bubolz & Sontag, 1993). Since the inception of the colonial college in the early development of the United States, students and faculty have been interconnected

in a living-learning community (Altbach et al., 1999; Brubacher & Rudy, 1976). This living-learning community approach to higher education is essentially an active human ecosystem. Adapting in part due to the immense growth period of higher education in the 1960s and 1970s, major research universities have moved to a process of education of the masses and away from the ideals of the liberal arts living-learning environment (Boyer Commission on Educating Undergraduates in the Research University, 1998). College students and faculty in a residential learning community interacting with and within their environment constitute an ecosystem (Stimpson, 1994).

Developed in the early 1930s and refined in the early 1990s, family ecology theory is a humanistic (Schwandt, 1997; Williams, 1985) systems approach to understanding group and individual behavior within a bounded environment (Bubolz & Sontag, 1993). Developed primarily from Bronfenbrenner's (1979) ecological model of child development, family ecology provides a means for investigators to study individuals and groups within their natural and built environments without needing to control for external impacts. By interacting with participants in their natural environment, researchers are able to incorporate the rich experiences of the participants while protecting the valuable influence of their surroundings (Bronfenbrenner, 1986; Bubolz & Sontag, 1993).

Bronfenbrenner (1979) developed an environmental systems model visually represented by four nested circles that differ based on their represented distance from the individual in the center. The *microsystem* is the system that deals with direct interactions to the individual. The next layer is the *mesosystem*, which represents the connections between *microsystems*. The *exosystem* is more of a representation of the social systems

indirectly governing the individual. And finally, the last environmental system is the *macrosystem*, which is best described as being the laws or cultures of the society. Bronfenbrenner (1986, 1993) later added the *chronosystem* to reflect the notion of time in the environment of the individual.

Bubolz and Sontag (1993) adapted the Bronfenbrenner (1979) model slightly in an effort to refine the focus on the family and to better represent the impact of others on the ecosystem. The Bubolz and Sontag (1993) family ecology environment is depicted by three nested layers surrounding the family system in the middle. The first layer nearest the family is the *human-built environment*, the *socio-cultural environment* encircling the human-built environment is the next layer, and the final layer of the *natural physical-biological* environment encircles the other systems. There is a two-way interaction line moving from the family at the center to the natural physical environment that goes through the human-built and social-cultural environments (Bubolz & Sontag, 1993).

The primary focus of my study is centered on the *microsystem* of student-faculty interaction within the *human-built environment* of the residential learning community, and thus both frameworks are essential in gaining insights into how undergraduate students develop. Initially designed for studying the child within the family, human ecology theory also lends itself well to a systems approach for studying groups of college students in a designed environment such as a residential learning community (Renn & Arnold, 2003). By incorporating the context of the subjects' environment, researchers can investigate the environmental influences and systems surrounding the subjects providing a greater insight into the complexity of the phenomenon (Parke, 2004; Renn & Arnold, 2003). Both the outcomes and process (Renn & Arnold, 2003) are important in helping to

define the experience, and in reflecting on the meaning made by these students resulting from their out-of-class interactions with faculty.

Significance of the Study

This study will add to the broad bodies of knowledge on the impact of structured residential learning communities on college students as well as enhance the understanding of the nature and impact of student-faculty interaction on college students in one RLC. Furthermore, it will introduce family ecology (Bubolz & Sontag, 1993), as derived from Bronfenbrenner's theory of human ecology (Bronfenbrenner, 1979), as a serious means for investigating and understanding the student experience on the modern college campuses.

Much of the current research on RLCs is developed from large national data sets such as the National Survey on Student Engagement (National Survey of Student Engagement, 2005; Umbach & Wawrzynski, 2005) or from multiple institutional studies (Inkelas et al., 2006; Inkelas & Weisman, 2003; Inkelas, Zeller, Murphy, & Hummel, 2006) based on survey analysis. This study provides complementary information on the nature of student-faculty interaction from the students' experiences and in their own words. Additionally, the student participants were able to share their experiences without the restrictions of categorized response selections as is often a limitation of survey research (Groves, 2004).

The published body of literature on student-faculty interaction in higher education reflects a shift from researchers studying *what* happens with respect to the specific interactions into more of the *why* and *how* the interactions occur (Lamport, 1993). Additionally in the early 1990s there was also a shift from the quantity of interactions

toward the quality of the student-faculty interaction experience (Lamport, 1993). The more recent work on student-faculty interaction addressed such areas as student academic achievement (Thompson, 2001), student engagement (Umbach & Wawrzynski, 2005), and differential effects for men and women (Sax, Bryant, & Berger, 2005). With the rapid development of the residential learning communities and stronger methodology for studying individuals in context, one next logical pathway is to incorporate the study of the phenomenon of student-faculty interaction into a sub-context of the residential learning community.

Urie Bronfenbrenner was widely acclaimed as one of the world's leading scholars on human ecology and developmental psychology up until his death in 2005 (Ceci, 2006). A quick search on January 25, 2007 in the cited reference index from the ISI Web of Knowledge returned over 1738 published works citing his theory of human ecosystems referenced in his book, *The Ecology of Human Development* (Bronfenbrenner, 1979). His theory is well-respected in psychology and human ecology and has been used successfully in studying undergraduate college students (Renn, 2003; Renn & Arnold, 2003). Bubolz and Sontag's (1993) adaptation of his human ecosystems theory into a working model for studying individual family members through family systems has helped researchers frame their studies within a family ecosystem (Hill, Ferris, & Martinson, 2003; Lerner, Fisher, & Weinberg, 2000). However, there has yet to be a published study from a human and family ecosystems perspective adapted toward investigating college students' experiences within their human-built environments. This study lends support to the notion of the human-built environment as having impact on the individual students' and their ecosystems.

And finally, the reform movement in education, with special emphases on the outcomes and value of higher education, has pushed institutions to provide evidence in support of their missions and purported outcomes for students (Boyer Commission on Educating Undergraduates in the Research University, 1998; The Carnegie Foundation for the Advancement of Teaching, 1990; U. S. Department of Education, 2006; Wingspread Group on Higher Education, 1993). Issues relating to student academic gains during college, career development, persistence, and other indicators of student success, as well as supplemental measures for faculty impact on college students are highlighted by this study providing support for the mission and functions of the study institution.

Key Findings

As revealed by the interview responses from the 14 students in this study, I found that students interacted with their faculty in a variety of settings, for various purposes, with varying frequency and intensity. These four variables helped me develop a typology of out-of-class student-faculty interaction. I categorized the interactions into two distinct levels that I identified as rudimentary and heightened. The rudimentary-level interactions happened at random intervals, were often based on a quick question or clarification of material, and had little structure or format, and tended to be infrequent in occurrence. The heightened-level interactions tended to have greater structure, regular frequency, a greater depth or complexity of the interaction, and often occurred in locations other than the faculty member's office or near the classroom. Students had a propensity to initiate the rudimentary-level interactions with their faculty, and some faculty initiated heightened-level interactions with some of the students from the rudimentary-level interaction group.

I also found that there is a pattern associated with the progression through the two levels of student-faculty interactions. A typical progression-flow through the out-of-class student-faculty interaction process often initiated from within the formal classroom with a faculty member and set of students. A subset of students individually initiated an out-of-class interaction or series of interactions with the faculty member. As defined above, these interactions were classified as rudimentary-level interactions. Then the faculty member selected a student or students from the rudimentary-level group to enhance their interactions into heightened-level interactions. Few students worked through the full filtering process from the classroom, to rudimentary-level, to the heightened-level, but the reported outcomes of the heightened-level interactions were significant and had great impact on the students. The primary exception to procession to heightened-level interactions derived from institutionally designed programs that created an immediate access point for students into a heightened-level student-faculty interaction experience.

The students in this study reported significant outcomes of increased student learning, motivation, self-worth, effort, and comfort level which they directly attributed to interactions with their faculty members. Their academic self-worth and their willingness to invest more in class were also directly attributed to their out-of-class interactions with their faculty. Some students identified a specific career track as a result of the mentoring effect of the heightened-level student-faculty interactions. All 14 participants indicated some aspect of a social or personal outcome attributed to these interactions ranging from a mentorship relationship with the faculty member to developing an academic peer network through the faculty member. Most students indicated that these were meaningful personal experiences.

Furthermore, the residential learning community and other institutionally developed programs and environments were found to have had a perceived impact on the program structure that allowed for greater access to and facilitation of out-of-class student-faculty interaction. The 14 participants of this study believed that the residential learning community provided an environment that fostered student-faculty interaction at a level significantly different than the rest of the institution. The Professorial Assistantship program through the Honors College matched incoming students directly with faculty for the purposes of a guided research experience and faculty mentorship. Faculty-led Study Abroad programs were credit bearing courses integrated with an international exposure. As both of these programs were intentionally designed by the administrators from the study institution to increase the interaction level among students and faculty, the student-reported outcomes of these heightened-level experiences were found to be similar to the students whose heightened-level interactions emerged from rudimentary-level interactions.

Key Definitions

For the purpose of this study, I defined a residential learning community (RLC) as an academic college, department, or program consisting of a formal curriculum embedded in a residential environment. Key distinguishing components include faculty assigned directly to the unit, academic facilities such as classrooms, laboratories, faculty offices, research facilities, academic support (e.g., library, help rooms, writing center) resources intertwined within the residence hall facilities, other residence hall amenities, and academic and student affairs professionals as part of the learning team. The RLC

must have intentionality of purpose and mission and distinguish itself from other theme-based residential or academic programs within the institution.

Interaction among and between students and faculty or academic staff is reported in numerous forms and contexts throughout the literature. Various researchers identified this interaction as faculty-student interaction, faculty influences, student-faculty relationship, or faculty impact (Blimling, 1993; Lamport, 1993; Pascarella, 1980; Pike, Schroeder, & Berry, 1997). For consistency purposes, I will summarize these interactions under the heading of *student-faculty interaction.*

The terms human ecology, family ecology, and family ecosystems vary in their origin and meaning (Bubolz & Sontag, 1993; Griffore & Phenice, 2001). In this study and for the purposes of understanding the larger framework from which I will investigate the nuances of out-of-class student-faculty interaction within a residential learning community, these terms will be used synonymously throughout this study(Bubolz & Sontag, 1993; Griffore & Phenice, 2001; Riker, 1965).

Throughout chapter four, student participants referred to their faculty members as faculty, teachers, professors, and mentors. These terms should all be considered equal in their use for representing the actual faculty member indicated by each student as there was no distinguishing feature of one particular identifier over any other identifier. However, in the results section of chapter four I have used these terms as identifiers to represent the students' perception of their faculty member's roles and responsibilities within the institution.

Organization of the Dissertation

This document is comprised of five major chapters. Chapter two builds a foundation of supportive literature in three primary areas – residential learning communities, student-faculty interaction, and human/family ecology theory. These three areas provide the foundation for building this study of out-of-class student-faculty interaction in a residential learning community as viewed through a human/family ecology framework or lens. Chapter three provides the research methodology for this study in which I address the participant selection, design, context, data collection, and data interpretation methods in detail. Chapter four provides the results of the study and sets the stage for chapter five which provides greater analysis of the results through the lens of the human and family ecosystem frameworks. I am careful not to over interpret the findings in chapter four, but rather present the data in a format that represents common themes or common ideas within the framework of the study. The final portion of chapter five closes this study by addressing implications of these findings for practitioners and directions for future study on out-of-class student-faculty interaction and residential learning communities.

CHAPTER TWO – A REVIEW OF THE LITERATURE

In this chapter I provide a foundation of supportive literature in three primary areas – residential learning communities, student-faculty interaction, and human/family ecology theory. These three areas provide the underpinning for building this study of student-faculty interaction in a residential learning community as viewed through a family/human ecology framework or lens. In the first section I introduce the residential learning community through the research on living on campus in residential halls and associated positive outcomes for learning and development. I continue the section with a discussion of the role of reform in higher education in creating a culture of learning. In the final part of this first section I focus on the development of learning communities and the many types of learning communities. The specific learning community that is at the heart of this study is also introduced in this section.

In the second section of this chapter, I summarize the extensive literature outlining the positive and significant outcomes associated with student-faculty interaction outside of the formal classroom. I identify, review, synthesize, and summarize three major literature reviews of pertinent research dating back to the 1930s. While the body of literature on student-faculty interaction was extensive, the existing literature reviews provide both a historical and recent summaries of the major impacts of student-faculty interaction on college students. I highlight the major outcomes of increased academic achievement, student development, persistence, career development, and college satisfaction associated with student-faculty interaction.

In the third section of the chapter I introduce the family ecology theoretical construct that I used as the framework or lens for this study. I outline the main construct

of the theory and its historical and developmental beginnings. I then identify core assumptions, values, and the philosophy of the family ecology theory and build them into the key concepts or tenets of the theory.

Finally, I close the chapter with an argument for using the family ecology theoretical construct to study out-of-class student-faculty interaction within a residential learning community, which transitions to the methodology and methods component of this study to be discussed in detail in chapter three.

Residential Learning Community

As stated in chapter one, for the purposes of this study, I defined a residential learning community (RLC) as an academic college, department, or program consisting of a formal curriculum embedded in a campus residential environment. Key distinguishing components included faculty assigned directly to the unit, academic facilities such as classrooms, laboratories, faculty offices, research facilities, library resources intertwined with living facilities and other residence hall amenities, and academic and student affairs professionals as part of the learning team. The RLC must have intentionality of purpose and missions, and distinguish itself from other residential or academic programs. This definition is important in understanding how on-campus residential living paired with the learning community movements in higher education in the United States have influenced the development of these RLCs which are central to this study.

Residential Living and Outcomes

By the early 1990s nearly 50% of higher education institutions in the United States offered on-campus housing, with approximately one-third of all institutions designed as commuter institutions offering limited or no on-campus housing (Pascarella

& Terenzini, 1991). The authors of the 2004 Annual Survey Results of the National Survey of Student Engagement estimated that 45% of all students in the engagement survey (160,000 students from 470 institutions) lived on campus (National Survey of Student Engagement, 2005).

The positive and significant outcomes on student learning and development for undergraduate college students living in an on-campus residential hall have been well documented over the past three and a half decades (Berger, 1997; Blimling, 1993; Chickering, 1974; Edwards & McKelfresh, 2002; Golde & Pribbenow, 2000; Inkelas et al., 2006; Inman & Pascarella, 1998; Kuh, Schuh, & Thomas, 1985; Kuh, Schuh, & Whitt, 1991; Pascarella, 1984, 1985; Pascarella & Terenzini, 1991; Pascarella, Terenzini, & Blimling, 1994; Pike, 1997, 1999; Pike et al., 1997; Rowe, 1981; Schroeder, 1981; Schroeder, 1981; Schroeder & Mable, 1994; Schuh & Kuh, 1984). Chickering (1974), in studying the differences between residential students and commuting students from an access and benefit-based perspective, concluded that living on campus positively affected student development and learning. He recommended specific curricular initiatives that focused on enhancing community development and student-faculty interaction (Chickering, 1974). Pascarella and Terenzini (1991) conducted an extensive review of the relevant research between 1970 and 1990, performed meta-analyses of the data, and provided an exceptional summary of the findings. Their research has shown that there is a very strong positive effect of living on campus on retention, persistence, and degree attainment. Additionally, there were moderate positive effects on the development of aesthetic, cultural, and intellectual values; increases in broader sociopolitical attitudes and values; increases in students' self-concept; increases in secularism; and significant

increases in intellectual orientation (Pascarella & Terenzini, 1991). Finally, there exists a weak, but still statistically significant positive effect on the development of autonomy, independence, a greater internal locus of control or efficacy, and moral development (Pascarella & Terenzini, 1991). These effects held true when controls were in place for pre-college academic potential and specific influential backgrounds traits (Pascarella & Terenzini, 1991; Pascarella et al., 1994).

Their more recent review of the relevant research from 1990 through the early years of the 21st century continued to support the findings from the earlier studies; however, the impact was less prevalent (Pascarella & Terenzini, 2005). The impact of living on campus on retention, persistence, and degree attainment; the development of aesthetic, cultural, and intellectual values; increases in broader sociopolitical attitudes and values; increases in students' self-concept; increases in secularism; increases in intellectual orientation; the development of autonomy, independence, and a greater internal locus of control or efficacy; and moral development were still found to have statistical significance, but to a much lesser extent (Pascarella & Terenzini, 2005). Programs designed to promote living-learning experiences tended to have the most significant impact/net effect for living on campus (Pascarella & Terenzini, 2005). These residential learning communities "blurred the boundaries between students' academic and social lives, and the evidence indicated clearly and consistently that they succeeded" (Pascarella & Terenzini, 2005, p. 421). Stassen (2003) studied three differing living-learning communities in a single institution and found that two of the three communities had statistically positive impacts on grades and retention after controlling for pre-college academic success predictor variables.

It may be that the effects of living on campus had a greater impact on facilitating the students' integration into the social, organizational, and cultural networks of the campus system and that integration may have accounted for many of the effects of living on campus (Astin, 1984; Pascarella & Terenzini, 1991, 2005; Tinto, 1998). Furthermore, the intentionality of living environment design and operation offers higher education professionals opportunities for direct and specific access to intervention programming to meet specific institutional needs or goals. Regardless of these transformative effects, "[r]esidential living can be a powerful force in shaping both the essential character and the developmental impact of an individual's college experience" (Pascarella et al., 1994, p. 39). The evidence supports the notion that there is still great value in studying the impact of students in residence on higher education (Schroeder & Mable, 1994).

Reform Movement on Student Learning

In the middle part of the 1980s, a major educational reform movement was established and multiple reports emerged on the poor state of K-16 education in the United States. One of the most startling and enlightening reports was *A Nation At Risk: The Imperative For Educational Reform* (Gardner, 1983). Others followed suit and admonished the infrastructure of education in the United States and the subsequent fall from grace among the world leaders. Reports such as *To Reclaim a Legacy: A Report on the Humanities in Higher Education* (Bennett, 1984), *Involvement in Learning: Realizing the Potential of American Higher Education* (National Institute of Education, 1984), and *Integrity in the College Curriculum: A Report to the Academic Community* (Association of American Colleges, 1985) added power to the reform movement. These reports highlighted the problems of access, accountability, assessment, and learning outcomes in

K-16 education in the United States. Individually, each report provided specific calls for action and immediate change in the current operations.

Boyer (1987) introduced the need for further development of a rapidly declining campus community.

> The undergraduate college should be held together by something more than plumbing, a common grievance over parking, or football rallies in the fall. What students do in dining halls, on the playing fields, and in the rathskeller late at night all combine to influence the outcome of the college education, and the challenge, in the building of community, is to extend the resources for learning on the campus and to see academic and non-academic life as interlocked. (Boyer, 1987, p. 177)

In 1990, Boyer further supported the need for addressing the rapid decline in the campus community in the Carnegie Foundation report *Campus Life: In Search of Community.* The report detailed survey data collected from college and university presidents on what they felt were the greatest dilemmas on their respective campuses. The specific examples that were shared reflected a deeper more prevailing problem in the loss of community on campus (The Carnegie Foundation for the Advancement of Teaching, 1990).

The remainder of the 1990s experienced a slight decline in public calls for education reform. The 1993 report *An American Imperative: Higher Expectations for Higher Education* (Wingspread Group on Higher Education, 1993) called for immediate assessment of current practices and a push for an outcome of enhanced student learning. In 1994, the American College Personnel Association published *The Student Learning Imperative: Implications for Student Affairs* as an impetus for the focus on student

learning throughout the institution, not just the classroom (American College Personnel Association, 1994). These reports, in part, sparked a system-wide movement from focusing on a teaching-centered to a learning-centered approach to students in higher education (Pike, 1999). They also opened the door for the Boyer Commission on Educating Undergraduates in the Research University (1998) to address other gaping holes in undergraduate education in large research-intensive institutions.

These collective studies on reform in higher education often cited the need for a holistic approach to integrative undergraduate learning.

> Research Universities have too often failed, and continue to fail, their undergraduate population.... What is needed now is a new model of undergraduate education at research universities that makes the baccalaureate experience an inseparable part of an integrated whole. (Boyer Commission on Educating Undergraduates in the Research University, 1998, p. 7)

The development of special learning communities, where faculty connect the curriculum in two or more courses and broaden the spectrum of formal classroom learning is one response to the call for reform in undergraduate education. It is important to note that these learning communities are not necessarily linked to residential learning, especially in their early formation. The community in these situations is initially comprised of just the faculty, students, and the classroom without the residential environment.

Learning Communities

For the past 15 years, there has been a major movement in reforming undergraduate education through the creation of various types of learning communities (Evergreen State College, 2005; Pascarella & Terenzini, 2005). The concept of students

learning in communities is not new. In the early part of the 20th century, many of the pioneers of higher education reform focused on developing a new idea of what constituted student learning and of the new role of the instructor within the curriculum (Smith, 2001). The modern learning community movement evolved from the body of research on cooperative learning (Slavin, 1991). The primary foundation for the modern learning community in higher education in the United States evolved out of the early 1920s at the University of Wisconsin when Alexander Meiklejohn created the Experimental College for the interdisciplinary study of democracy (Smith, 2001). Community development and a seamless integration of the lower-division (first and second year) undergraduate student participants' living and learning environments was the driving force behind his initiative (Smith, 2001).

The next influential period came in the 1960s when access to higher education and subsequently enrollments significantly increased. A handful of institutions developed innovative and experimental programs focusing on interdisciplinary and residential education (Smith, 2001). Later, in the middle part of the 1980s, specific programs designed to link student learning in the curriculum emerged as a response to the push for reform in higher education. The Washington Center for Undergraduate Education at Evergreen State College in Olympia, Washington, one of the premier research and resource centers for learning communities, evolved out of this period.

Today's learning communities take many forms, however consistent themes emerged from the various programs – a specific population of students, connected learning through courses, seminars, and faculty leadership (Brower & Dettinger, 1998; Brower et al., 2003; Gabelnick, MacGregor, Matthews, & Smith, 1990; Golde &

Pribbenow, 2000; Matthews, 1996; Pike, 1997; Smith, 2001). As the Boyer Commission (1998) envisioned, students were at the center of a more holistic learning environment, and faculty were attempting to connect learning through more avenues than just their individual course.

Major conferences and formal gatherings have emerged to address the issue of college student learning within communities. The *Ninth Annual Conference on Learning Communities and Collaboration* was recently held in Kansas City, Missouri and brought hundreds of educators together to share resources, best practices, research efforts, learning outcomes, and funding support for learning communities across America (Metropolitan Community Colleges, 2004). The following week, Indiana University (2005) in Bloomington, Indiana hosted the *Eighth Conference on Living-Learning Programs and Residential Colleges* to focus professionals on issues relating to residential learning in on-campus housing. Additionally, the Washington Center for Improving the Quality of Undergraduate Education annually sponsored the *Summer Institute on Learning Communities* for teams of educators to develop and enhance learning communities on their campuses (Evergreen State College, 2005). Even individual institutions hosted campus events to foster program development and research on learning communities (Cornell University, 2005).

Types of Learning Communities

Higher education professionals were continually formulating a common definition of what constituted a learning community (Johnson & Romanoff, 1999). "[L]earning communities...must integrate academic subject matter and social interactions while providing the physical space or facility for an intellectually stimulating environment to

emerge" (Brower & Dettinger, 1998, p. 15). The curriculum, not the residential environment, should be the primary component of the formal learning community (Gabelnick et al., 1990). Hence, the academic curriculum both with and within the living community helped define the residential learning community as identified later in this section.

The three predominant forms of these structured learning communities were defined as Freshman Interest Groups (FIGs), themed housing within a residence hall or house, and residential colleges. FIGs were defined primarily by the connection of a minimum of two courses common to a group of incoming new students, and not necessarily residential in nature (Brower & Dettinger, 1998; Shapiro & Levine, 1999; Talburt & Boyles, 2003). This connection was widely defined by the institution or specific program, but commonly, the faculty members teaching these introductory courses – primarily in the institution's general education curriculum – connected the learning in a primary course with a cognate or supplemental course such as an introductory composition course or more often a freshman or first-year seminar course. In essence, each faculty member maintained primary responsibility for her individual course curriculum, however the faculty developed critical links or connections between the two subjects and shared responsibility for the learning objective (Shapiro & Levine, 1999). Each learning community was distinct unto itself with the specific theme and type of program having differential impacts on each student participant (Jones, Levine Laufgraben, & Morris, 2006). For example, a learning community consisting of an introductory history course and an introductory composition course might have had the faculty member of the composition course collaborate with the history professor to use

the content theme in history as the subject matter for the composition exercise. Students would have then been integrating the two subjects and reinforcing the learning in history through their composition work.

From a more residential perspective, the themed housing approach to learning communities was more appropriately defined as housing or residence life initiatives where students with a common academic interest are assigned to a common living community. The housing and residence life staff supplemented the living experience with the introduction of faculty or even seminar coursework to the living community (Shapiro & Levine, 1999; Zeller, 1994). For example, the University of California Los Angeles offers nine themed housing options to undergraduate students on themes ranging from social justice to the great outdoors (The Regents of the University of California, 2001). In an attempt to expand the campus community, even Sigma Phi Epsilon, the nation's largest Greek letter social and service fraternity, entered the residential learning community movement by adding computer laboratories, faculty fellow office space, and increased educational programming to the traditional chapter house (Thompson, 2004). This model fit well within the themed housing approach to residential learning communities as there is intentionality in design, support mechanisms for learning outside of the classroom, and a common bond of a structured living environment, but lacked the true campus or institutional structure including the faculty and curriculum.

More appropriate to this study was the residential college concept for a residential learning community based on the Oxford and Cambridge models of Great Britain (O'Hara, 2005; Rowe, 1981). Historically, students from these early institutions had to fend for themselves and formed small clusters or groups for learning and support. This

800-year old concept evolved into the modern day cluster colleges that together formed a university (Murray State University, 2005). While the traditional residential college was a distinct form of a learning community, it was also quite specific to the Cambridge and Oxford models (Rowe, 1981). Faculty members served as the directors, headmasters, and leaders of subgroups called houses or colleges that were distinguished by their academic program or curriculum. Some of the primary faculty and their families (when appropriate) lived in the house and were often intimately involved in the happenings of their residential students. Other programs in the United States offered a residential college experience, but most tended to vary subtly from the original form. The modern residential colleges across the United States are uniquely defined by each institution and lack consistency and uniformity.

Residential colleges are developing across the world. Internationally, Australia, Canada, and Malaysia are leaders in developing these programs within higher education (O'Hara, 2005). In the United States, Harvard University and Yale University became the local benchmark for the British model of a residential college (O'Hara, 2005). RLCs are developing in a wide range of institutions. Princeton University joined the residential college movement by adopting five distinct colleges for all of the first and second year students (The Trustees of Princeton University, 2005). In 1996, Murray State University, a regional public four-year comprehensive institution in Murray, Kentucky announced that all undergraduate students and faculty were going to be grouped into one of six distinct residential colleges (Geraghty, 1996). More recently the residential college program at Murray State is stronger than ever as they presently maintain eight residential colleges within their eight residence halls (Murray State University, 2005). Santa Clara

University in California, a Jesuit Order Catholic institution, has nine distinct residential learning communities (Arora, 2005). St. Lawrence University requires all freshmen to live in one of 18 residential colleges on campus (Weinberg, 2005), and Rutgers University converted the historic Douglass College for women into a residential college during a major restructuring of their undergraduate programs (Fain, 2006). The RLC trend is likely to continue throughout the United States as students and their parents continue to demand more from the higher education experience.

Residential Learning Communities

A key component of this study was the residential learning community (RLC). Institutions across the United States have been investing heavily in these residential learning communities and providing intentional connections with the academic curriculum and faculty integrated into the living environment of the student (Gabelnick et al., 1990; Indiana University, 2005; Murray State University, 2005). As the modern RLC is still fairly young in its existence, the research on these programs is still developing. Researchers have revealed the positive outcomes of greater retention through campus integration (Tinto, 1998), increases in academic achievement (Kuh, 1995), and successful transitions to the college environment (Gabelnick et al., 1990; Shapiro & Levine, 1999; Talburt & Boyles, 2003), but much of the qualitative impact of RLCs on students is still largely unknown.

Not all research on RLCs shared a positive light on this growing trend. Talburt and Boyles (2003) in their study of Freshmen Learning Communities identified concerns with the current movement. The researchers questioned institutional motives for developing such programs. They postulated that it was imaginable that institutions are

using these learning communities "for purposes other than developing students critically" (Talburt & Boyles, 2003, p. 26). Additionally they challenged the norms of the espoused history of the development of these living-learning programs, and posed concerns about the traditional delivery of higher education to students and the underlying traditional curriculum (Talburt & Boyles, 2003).

Summary of RLCs

This section has provided an overview for the positive and significant impacts on college students who lived on campus. It has also provided a background to the political and educational forces calling for a change in the way institutions educate undergraduate students. The learning community movement evolved out of this pressure for change and has taken many forms. By combining the benefits of on-campus residence and structured learning communities, residential learning communities have developed into intentional environments that foster a significantly better undergraduate learning experience (Brower & Dettinger, 1998; Brower et al., 2003; Golde & Pribbenow, 2000; McDonald et al., 1999; Pascarella & Terenzini, 1991, 2005). Understanding the development of these residential learning communities through formal residential education, educational reform, and the learning community movement is important because it supports the context of this study as well as the need for research into this area. Additionally, the current body of research on RLCs is mixed and limited, which lends support to the need for further studies in this area.

Many of these learning communities were intentionally "designed to respond to the needs based on research that constructs the first year of college as a risky developmental passage from which students can be protected in small, safe, interactive

communities" (Talburt & Boyles, 2003, p. 9). This intentionally designed environment for student learning and development provides the context for students to interact with their faculty outside of the formal classroom. With faculty members integral to the residential learning community, it is no surprise that student-faculty interaction is another key component of the development of these residential learning communities (Pike, 1999).

Student-Faculty Interaction

College students' interactions with their faculty members is one of the most significant influences in a college student's undergraduate experience (Altbach et al., 1999; Kuh, 2001; Pascarella & Terenzini, 1991, 2005; The Carnegie Foundation for the Advancement of Teaching, 1990). The most traditional form of student-faculty interaction is in the formal academic classroom environment. Most studies of this interaction have focused on student learning. Students, faculty, and administrators are now realizing the vast impact on undergraduates of student-faculty interaction outside the of the formal classroom (Boyer, 1987; Cokley, 2000; Kuh, 1995; Murray State University, 2005; Pascarella & Terenzini, 1991, 2005). In this section I highlight the extensive literature outlining the positive and significant outcomes associated with student-faculty interaction outside of the formal classroom.

Lamport (1993) conducted a literature review of relevant research spanning over 60 years that "examined the effects of quality and frequency of student-faculty informal interaction" (p. 985). Lamport's study was built on the framework established in Pascarella's (1980) earlier work on the same topic. Faculty have been shown to have significant positive impact on such students issues as academic achievement, cognitive

and affective development, persistence and degree completion, overall satisfaction with college, and career goals and aspirations (Lamport, 1993).

Pascarella and Terenzini (1991) also conducted an extensive review of the relevant research between 1970 and 1990, performed a meta-analysis of the data, and provided a summary of the findings. The research has shown that there was a very strong positive effect of student-faculty informal interaction on academic achievement issues such as higher grades, cognitive development issues such as problem solving and evaluation skills, program completion, career goals and aspirations, and overall satisfaction with college (Golde & Pribbenow, 2000; Pascarella & Terenzini, 1991). These effects also held true when controls were in place for pre-college academic potential and specific influential backgrounds traits (Pascarella & Terenzini, 1991; Pascarella et al., 1994).

Pascarella and Terenzini's 2005 follow-up to their work from 1991 summarized the research data on college students from 1990 to the early 2000s. This summary continued to support the positive impact of student-faculty informal interaction on academic achievement, cognitive and affective development, persistence and degree completion, career goals and aspirations, and overall satisfaction with college (Pascarella & Terenzini, 2005). The next five subsections provide examples of studies on academic achievement, student development, persistence, career development, and overall satisfaction and how students were impacted through student-faculty interaction experiences.

Academic Achievement

Numerous studies have focused on how informal or out-of-class student-faculty interactions positively impacted student learning (Anaya & Cole, 2001; Cokley, 2000; Endo & Harpel, 1982; Kuh, 1995; Kuh, Douglas, Lund, & Ramin-Gyurnek, 1994; Kuh et al., 1985; Pike, 1999; Pike et al., 1997; Thompson, 2001; Tinto, 1987, 1998; Woodside, Wong, & Wiest, 1999). Anaya and Cole (2001) studied 836 Latina/Latino students across the country and found that student-faculty interactions were positively associated with academic performance. In a single-institutional study, Pike (1999) surveyed 626 first year students and found significant gains in learning and intellectual development for students with increased student-faculty interactions in a residential learning community. Thompson (2001), in a national study of the influence of informal student-faculty interaction on educational gains in science and math, found a significant positive correlation. And Woodside and colleagues (1999) found significant increases in student's academic and overall self-concept associated with student-faculty interaction.

Student Development

Kuh (1995) studied 149 undergraduate students over a six month period from various institutions identified as having "rich out-of-class learning and personal development opportunities" (p. 127). With involvement and campus integration being the primary components of their out-of-class experiences, the students commented on how these experiences helped develop them as leaders and learners. Students communicated with the researchers about their experiences with faculty outside the classroom and commented on the resonant levels of learning that they contributed directly to this student-faculty interaction (Kuh, 1995). Cokley (2000) studied issues of academic

motivation and faculty influences. As he had anticipated, Cokley found that faculty had a significant positive influence on student development and student learning (Cokley, 2000).

Persistence

Additional studies existed on how informal or out-of-class student-faculty interactions positively impacted student retention, persistence, and degree completion (Kuh, 1995; Kuh et al., 1985; Pike et al., 1997; Tinto, 1987, 1998; Wilson, 1996; Woodside et al., 1999). Vincent Tinto (1998), widely known as a leader in the study of college student persistence, identified involvement and social integration as key factors in influencing college student departure decisions. Pike and colleagues (1997) further studied the relationship of how the indirect influence of a student's incorporation into university environment and culture greatly enhanced the student's persistence and degree completion rates. Both studies had strong components of intentional student-faculty interaction outside the classroom (Pike et al., 1997; Tinto, 1998).

Career

Astin (1993), in a study of the Cooperative Institutional Research Program (CIRP) data from 1985 to 1989, found a statistically significant impact of student-faculty interaction on students' career decisions to become a college teacher or research scientist. Astin and Astin (1993) found similar statistically significant impacts of student-faculty interaction on students' choice of a career as a research scientist. And Eimers (2000), in an environmental influence study, found that student-faculty interaction significantly impacted both minority and non-minority students on four specific issues relating to career development.

Satisfaction

Many of these recently discussed factors of academic achievement, student development, persistence, and career decision making were also factors that influenced students' general level of satisfaction with their undergraduate experience (Kuh, 1995; Kuh et al., 1985). While some of the more recent studies (Edwards & McKelfresh, 2002; Pike, 1999) indicated statistically significant outcomes, the measure of student satisfaction seemed to be blended into the overall measures of persistence, development, and academic achievement (Kuh, 1995).

Student-faculty interaction summary

From the literature reviewed in this section, it is evident that student-faculty interaction had significant and positive impacts on students' academic achievement, development, persistence, career influence, and overall college satisfaction. Furthermore, living on campus had significant and positive impacts on measures of student achievement; student persistence; and value, moral, and intellectual development. Research now needs to be conducted on the contextual aspects of student-faculty interaction within a residential learning community that is designed to promote student success.

In studying the association of student-faculty interaction with specific student outcomes, it may often be true that these outcomes are secondary effects to other possible impacts such as convenience of office location or the age of the professor. As suggested with the impact of living on campus on students, it may be that the effects of living on campus have a greater impact on facilitating the students' integration into the social, organizational, and cultural networks of the campus system and that integration

accounted for much of the effects of student-faculty informal interaction (Astin, 1984; Pascarella & Terenzini, 1991, 2005; Tinto, 1998; Zheng, Saunders, Shelley, & Whalen, 2002). "Clearly, out-of-class experiences influence student learning and personal development" (Kuh, 1995, p. 124). Nonetheless, these associations and outcomes existed and have value to this study.

In the following section I introduce the family ecology framework selected for this study. First, I identify the main construct of the theory is shared building from the historical and developmental beginnings. Next, I share the core assumptions, values, and philosophy of the family ecology theory which builds into the key concepts or tenets of the theory. Finally, I frame the context for the study.

Family Ecology Framework

As a framework for this study, I have selected the Bubolz and Sontag (1993) model of a family ecosystem. Family ecology theory was derived from core assumptions of human ecology (Bronfenbrenner, 1979) and systems theory. The family in interaction with the environment constitutes an ecosystem (Bubolz & Sontag, 1993). All parts of the ecosystem are interdependent. The family carries out essential life functions for themselves and the greater society. This holistic, living-systems approach for viewing the family enables multiple levels of inputs into the family system. The outcome is a richer and fuller assessment of the family from multiple perspectives.

The model is depicted by a series of four nested layers with the family in the center surrounded by the environment (Bubolz & Sontag, 1993). The environment is depicted by three nested layers consisting of the *human-built environment* nearest the family, the *socio-cultural environment* encircling the human-built environment, and the

natural physical-biological environment encircling the entirety (Bubolz & Sontag, 1993). There is a two-way interaction line moving from the family at the center to the natural physical environment that goes through the human-built and social-cultural environments (Bubolz & Sontag, 1993). The primary focus is centered on the *microsystem* of student-faculty interaction within the *human-built environment* of the residential learning community. For this study, the transition from the family as the central unit of study to students and faculty in a residential learning community is easily transferred as the shared characteristics of these groups are readily identified in chapter four.

Foundations of Human Ecology Theory

To better understand the family ecology theory to be used in this study, it is important to understand the development of human ecology theory and the subsequent development of ecological systems theory of human development. "Human ecology theory is unique in its focus on humans as both biological organisms and social beings in interaction with their environment" (Bubolz & Sontag, 1993, p. 419). Family ecology is a subset of human ecology and therefore defined as the study of the family interacting within the environment. Human ecology was built upon the concept of ecology, or the study of living organisms interacting with their natural environment. In the last third of the eighteenth century, Haeckel proposed the development of this field which he termed oekologie – derived from 'oik,' the Greek root meaning home (Bubolz & Sontag, 1993).

Three key components of human ecology are that people and their environment are interdependent, the environment is resource rich, and humans make decisions that have impact on the environment (Bubolz & Sontag, 1993). This approach to the study of home economics was holistic and interdisciplinary. In the early 1900s fields such as

sociology, geology, psychology, political science, economics, and human resource management were using human ecology perspectives in their research and literature (Bubolz & Sontag, 1993). Additionally, the study of home economics was based in the sciences and applications were developed with the goal of family social improvement (Bubolz & Sontag, 1993).

"Human ecology is concerned with interaction and interdependence of humans (as individuals, groups, and societies) with the environment" (Bubolz & Sontag, 1993, p. 421). Adaptation in and to the environment is a major process in human ecology. Adaptation is based on the need for humans to survive, have a good quality of life, and conservation or sustainability of the natural environment. Perceptions, values, decision-making, and the behaviors of people are key components and extremely important (Bubolz & Sontag, 1993). Reaching goals and satisfying needs are the driving forces for life in the human ecosystem. Decisions made by the family, and the societal response to those decisions all influence the greater humanity (Bubolz & Sontag, 1993). Everything is interconnected.

Development of Ecological Systems Theory

In the late 1970s, Urie Bronfenbrenner (1979) from Cornell University greatly enhanced the ecological systems approach to studying human development and behavior (Bubolz & Sontag, 1993). He developed a model of four nested environmental systems that differ based on the represented distance from the individual in the center. The microsystem is the system that deals with direct interactions to the individual. For instance, the microsystem level could include a student's relationship with her parents, or sibling relationships. The next layer is the mesosystem, which represents the connections

between microsystems. A prime example is the interaction between a student's parents and her college professor or academic advisor. The two microsystems do not necessarily need to interact directly to be considered a mesosystem. The exosystem is more of a representation of the social systems indirectly governing the individual. Here, a good example would be the workplace of the student's parents. Finally, the last environmental system is the macrosystem, which is best described as being the laws or cultures of the society. Bronfenbrenner (1986, 1993) later added the chronosystem to reflect the notion of time in the environment of the individual.

Renn and Arnold (2003), in studying college student peer culture, provided strong rationale for the use of human ecology theory in studying college students.

> Human ecology theory is more than a framework for explaining and studying the processes of student development; it is a useful guide for educational practice. The ecology model accounts for the specificities of time, place, and culture as well as differences in students' backgrounds and similarities in their experiences once in college. (Renn & Arnold, 2003, p. 285)

The family ecosystem construct (Bubolz & Sontag, 1993), built off the tenants of Bronfenbrenner's (1979) human ecosystem model, provided me as the researcher a quality insight into the experiences of students and faculty within a residential learning community ecosystem.

Bubolz and Sontag (1993) identified early potential limitations to the theory as being highly abstract at a conceptual level, straying a bit from pure ecology, being very broad in scope, and consisting of new and confusing terminology.

> The theory sensitizes us to significant questions and to new kinds of relationships between ideas that may not be addressed in other theories. However, it may not be easy to test the theory in the traditional sense. The kind of explanation and understanding the theory can provide needs further exploration. (Bubolz & Sontag, 1993, p. 442)

I believe that the theory will become more refined as researchers use it in various and multiple settings to grasp an idea of what is happening in the family or group system. Renn and Arnold (2003) have solidified the concept of using human ecosystems theory to study college students in their campus environment. The Bronfenbrenner (1979) model, as outlined by Renn and Arnold (2003), is the foundation to the Bubolz and Sontag (1993) family ecology model. Therefore, the use of this family ecology model is quite applicable and appropriate to investigate student-faculty interaction in a residential learning community.

Core Assumptions, Concepts, Values, and Philosophy

These family systems are open, complex, and self-regulating systems (Bubolz & Sontag, 1993). Family systems react to change or stimuli from the environment, but can also impact the environment . They are active, proactive, and reactive with the environment. Goals and purpose have meaning in the family ecosystem. Families, like students, make decisions and take action to attain their goals and fulfill their needs.

Values are also at the heart of a family ecology theory (Bubolz & Sontag, 1993). Survival is the key to living systems. The fundamental value of human betterment as defined by the virtues of sufficient resources, justice, freedom, and peacefulness are values found within the goal of survival. The quality of life is also enhanced by the

positive virtues of health, education, love, production, beauty, courage, and tolerance (Bubolz & Sontag, 1993). In this study, the student has one set of values, the faculty another, and the RLC has a set of institutional values.

Both individuals and the greater families have requirements or *needs* for adaptation and survival (Bubolz & Sontag, 1993). Needs are categorized into groups of having needs, relating needs, and being needs. The manner in which these needs are addressed is fundamental to understanding the family. "Management is the comprehensive process involving the attainment, creation, coordination, and use of resources for meeting goals and realizing values" (Bubolz & Sontag, 1993, p. 436). Decision making, discussed next, is a key component to all management activities. Decision making is the main use of energy in a family system. It is what fuels actions and behaviors. The various types of family decisions are classified as technical, economic, integrative, judicial, and political (Bubolz & Sontag, 1993).

Family ecology theory was designed to study human development throughout the lifespan (Bubolz & Sontag, 1993). Changes over time in reaction to decisions within an environment are key components to human development. Quality of human life is an outcome of the measures of goal attainment and need fulfillment. In respect to the natural environment, issues of sustainability and available resources are essential factors in the life and health of the environment. Overall quality is an outcome of the interdependence of environmental quality and quality of life.

These broad concepts may seem quite distanced from the study of student-faculty interaction in a residential learning community, but they provide important points of focus during the interview. The flow of energy in any system is the focus of the study.

The flow of energy between the student and faculty within the residential learning community ecosystem is the focus of this study. More of these key components will be addressed in chapter four.

Summary

The concepts of family ecosystem theory are abstract, the theory itself is still relatively new, and the type of study is qualitative in nature. This framework challenges the traditional positivist, quantitative, historically structured community of science. The framework of human or family ecology provides a strong rationale in which to study student-faculty interaction in a residential learning community (Renn & Arnold, 2003). Bubolz and Sontag's (1993) family ecosystem model will help me as the researcher tell a rich story of the behaviors and experiences of the participants within and with respect to their residential learning community environment.

> An ecological approach to peer-culture accounts for the ever changing nature of the student body and the institutional environment and emphasizes the connecting links between administrative, faculty, and student contexts. (Renn & Arnold, 2003, p. 287)

This study explored the out-of-class student-faculty interaction experiences of students in a residential learning community environment in a single institution. Researchers have revealed the positive outcomes of greater retention through campus integration (Tinto, 1998), increases in academic achievement (Kuh, 1995; Stassen, 2003), and successful transitions to the college environment (Gabelnick et al., 1990; Shapiro & Levine, 1999; Stassen, 2003; Talburt & Boyles, 2003), but much of the impact of RLCs on students is still unknown. Residential colleges, living-learning programs, and themed

housing programs are being developed rapidly in residential institutions of post-secondary education in the United States. Institutions are investing significant resources renovating living environments, classrooms, common areas, study environments, and faculty offices in an attempt to increase the quality of the undergraduate educational experience hoping to see an increase in degree attainment, college satisfaction, and ultimately success (Fain, 2006; Geraghty, 1996; Murray State University, 2005). In the next chapter I outline the guiding phenomenological methodology and interview data collection methods used for this study.

CHAPTER THREE – METHODOLOGY AND METHODS

As *methodology* is the overall approach to the study, and *methods* are the gathering and collection of data (Arminio & Hultgren, 2002), I differentiate these components of this study and address them individually.

Methodology

The purpose of this study is to investigate the *nature of* and *outcomes associated* with out-of-class student-faculty interaction in an undergraduate residential learning community. It is essential to understand that meaning is constructed by the participants in interaction with and within their environment. The basic epistemological assumption of this study is that the experiences of the participants are real, personal, and both relationship and context dependent (Rossman & Rallis, 1998; van Manen, 1990). In order to understand the experiences of these students in a particular context it is important for me to ground the study in formal and peer respected methodological approaches while providing a window for the study to help define some of the methods (Arminio & Hultgren, 2002; Atkinson, 2005; Gubrium & Holstein, 2002; van Manen, 1990).

The guiding methodology of this study is basic human phenomenology (Arminio & Hultgren, 2002; Creswell, 1998; Miles & Huberman, 1994; Rossman & Rallis, 1998; Schwandt, 1997; van Manen, 1990). Meaning is "constructed by human beings as they engage with the world" (Crotty, 1998, p. 43). Meaning in this study is socially constructed by the participants' real-life experiences within their natural and built environments. Multiple realities exist and are extremely subjective both to the participants and to the researcher (Schwandt, 1997). As addressed in detail in chapter two, other researchers have studied student-faculty interaction (Lamport, 1993) and

residential learning communities (McDonald et al., 1999; Pike, 1999) from a variety of perspectives, but much of the findings were based on survey data. I contend that the students' experiences are not necessarily bounded by a list of possible responses, which is the reason I have selected to conduct this study. The goal of this study was to investigate and explore the experiences of undergraduate students in out-of-class student faculty interaction with a focus on the residential learning community environment, therefore I have grounded this study firmly in the literature with a strong methodological approach that incorporates well-established methods for participant selection and data gathering which I address in detail throughout this chapter (van Manen, 1990).

This investigation into the *nature of* and *outcomes associated* with out-of-class student faculty interaction is grounded in the perspective that basic human phenomenology is essentially the study of the human (student) experience. The individual responsive interview (Rubin & Rubin, 2005) is the primary method for the collection of the data, which is crucial to my ability to interpret and share these students' experiences. Realizing that "the interview remains an area of richly diverse practice about which few convincing generalizations can be made" (Platt, 2002, p. 51), I use this interview style to allow for short answers, narratives, voice inflections, and even some non-verbal responses that help to convey the meaning of the student participants, which is the true intention of this study (Warren, 2002).

In this phenomenological study, meaning comes from both the direct responses of the interview participants and the thematic analysis of the researcher (Atkinson, 2005; van Manen, 1990). In chapter four, I share the rich meaning for the individual students' as well as the collective meaning derived from a thematic analysis of the responses.

Context

Context is an essential element of this study, so it deserves significant attention (Evans, 2002; Gubrium & Holstein, 2002). The study institution is classified as a large, public, Midwestern, research intensive, AAU member, land-grant university. The institution has a primarily residential student body and boasts the largest housing operation in the United States. Annually, over 7000 first-time freshmen enter the university and are required to live on campus for their first full year.

Established in 1967, the RLC of this study was designed as an independent college within the university and since 1982 resides within the College of Natural Science at the study institution. This program was developed to create a residential living-learning environment within the university structure for students interested in studying the natural sciences and the impact of science on society. As a residential learning community, the RLC is housed entirely within the largest residential complex on campus, with a capacity of 1250 undergraduate students in two major wings. Students lived in suite-style rooms designed for two student residents in each room with a shared bathroom connecting every two rooms. Like many traditional campus housing complexes, this residence hall contains common living spaces including study lounges, social lounges, a cafeteria, informal and multipurpose space, music practice rooms, reception/service desks, a convenience store, and other traditional residence hall amenities. Additionally, the academic component of the residential learning community provides space for classrooms, science laboratories, and faculty, staff, advisor, and administrative offices. Together, this residential complex and academic program forms the residential learning community.

Students are first admitted to the university, and then based on their admission date they may select to join the RLC. Since 1998, the program annually matriculated 500 incoming first-year students, and in 2006 increased by 25% to 625 first-time first year students with a total program enrollment of 1761 undergraduate students. Other students with interest in the program are placed on a wait list and are eligible to be selected to the program to ensure the program reaches the target enrollment. Once a student enters the program, she/he selects from 34 coordinate majors in the biological, computational, environmental, and physical sciences. Students are required by the institution to officially declare a major once they reach junior status.

The faculty members of the RLC are responsible for teaching introductory level courses in chemistry, biology, physics, mathematics, and science and technology studies (the investigations of the history, philosophy, and/or sociology of science, technology, the environment, and medicine) to first and second year students. Once students enter their selected major near the end of their second year, they enroll in most of their coursework in the specific academic department of their major outside of the RLC. Most of these first and second year courses are offered in the classrooms and laboratories within the residence hall complex and at significantly smaller student-to-faculty ratios than equivalent courses offered elsewhere in the university. This arrangement is convenient for both faculty and students as all first-year students and a majority of the sophomore students in the program reside in the residence hall, and all of the faculty members have their primary offices in the same residence hall complex. All of the courses taught within the RLC are reserved specifically for students in the program.

Guiding Questions

Based on the recent trends in the development of residential learning communities within colleges and universities I was captivated to study issues of student-faculty interaction in a residential learning community grounded in the following guiding questions:

1. What is the *nature* of out-of-class student-faculty interaction in a residential learning community?
2. What are the *outcomes* associated with out-of-class student-faculty interaction in a residential learning community?

Method

I interviewed 14 undergraduate students in the College of Natural Science pursuing the Bachelor of Science degree in the life or biological, physical, computational, or environmental sciences. Data was collected from all participants as interviews, then analyzed as narratives and short responses and coded through the family ecology framework. Chapter four addresses the full and specific analysis of the data.

Participants

I selected 14 students who were beginning their second year as undergraduates to participate in this study. The number 14 is represents the number of students interviewed to reach a saturation point where additional interviews would not provide any new or significantly different information to this study (Seidman, 1991). Ten out of the 14 students were members of the RLC of this study. The other four students – Alex, Brooke, Christina, and Michelle –

were also majors in the College of Natural Science, but were not participants in the RLC. Structurally, the RLC is a unit within the College of Natural Science, so all participants were science majors within the College of Natural Science. All 14 students participated in an approximately 30-minute responsive interview with me. Due to my role as a senior administrator and academic advisor in the RLC, I elicited the assistance of the Director of Undergraduate Student Affairs for the College of Natural Science to contact prospective student participants. The Director of Undergraduate Student Affairs sent two e-mail messages to all second-year students in the College of Natural Science offering them the opportunity to participate in this study. Students responding to the e-mail message were sorted into two groups based on their membership in the RLC. Of the 14 participants, nine were women. Broken down by RLC membership, five of the 10 RLC members were women. The racial/ethnic breakdown of participants reflected the membership of the RLC. Table 1 on the next page identifies the 14 participants by their pseudonym, major, career goals, sex, and RLC membership. Students are listed alphabetically by their selected pseudonym.

Alex, Brooke, Christina, and Michelle are all female students and were in their second year of study and had never been a part of the RLC. Anna, CZ, Fern, Jennifer, and Sara are also female students and were in their second year of study, but all five were members of the RLC. The remaining five students – Ben, Jeff, Joe, Randy, and Steve – are male students and were also in their second year of study and members of the RLC. Each student provided me information on their current major course of study and intended career goals which I listed in Table 1.

Table 1 – Participants

Name	Major	Career Goals	Sex	RLC
Alex	Zoology	Veterinarian – wildlife or exotic animal	Female	No
Anna	RLC Environmental Biology & Spanish	South American Rainforest Ecologist	Female	Yes
Ben	RLC Biological Science	Secondary Educator	Male	Yes
Brooke	Biochemistry & Spanish	Homicide Detective	Female	No
Christina	Zoology & French	Physician	Female	No
CZ	RLC Physiology	Physician – Pediatrics	Female	Yes
Fern	RLC Zoology	Physician/ Professor	Female	Yes
Jeff	RLC Physiology & Psychology	Physician	Male	Yes
Jennifer	RLC No Coordinate	Secondary Educator	Female	Yes
Joe	RLC Human Biology	Dentist – Oral Surgeon	Male	Yes
Michelle	Human Biology	Physician – neurosurgery	Female	No
Randy	RLC Human Biology	Ophthalmologist	Male	Yes
Sara	RLC Human Biology	Physician – Emergency Medicine	Female	Yes
Steve	RLC Physical Science	Secondary Education	Male	Yes

Data Collection

Each participant engaged with me in an individual responsive interview (Rubin & Rubin, 2005). I recorded all sessions on a digital audio recorder and then transcribed the interviews into manuscript format. I selected the responsive interview protocol as a method for its ability to help me as the researcher participate in a structured conversation with each participant allowing for better maintenance of continuity, clarification of meaning and understanding, and for providing the ability to incorporate narratives and stories directly into the interview (Rubin & Rubin, 2005).

The interview protocol, as outlined in the Appendix of this document, consisted of introducing myself as the researcher and my research topic,

reviewing rights of participants through the *Informed Consent Form*, developing rapport with participant through basic demographic and experiential questions, and transitioning into the main questions with follow-up questions and probes embedded (Rubin & Rubin, 2005). Each interview closed with me thanking the participant for his or her time and input, providing the participant an opportunity for a follow-up interaction if warranted, and a final review of the *Informed Consent Form* with the participant (Rubin & Rubin, 2005; Seidman, 1991). I conducted a preliminary interview of a recent graduate of the RLC, which did not become part of my formal data. Based on my assessment of the preliminary interview, I slightly edited the interview protocol to enhance flow, and ensure that the questions I asked participants lead to appropriate responsive data (Rubin & Rubin, 2005).

Interviews lasted between 16 and 27 minutes, with most in the 20 to 24 minute range. All 14 student interviews were conducted prior to any formal analysis of the data. To best help with the analysis, I made a few field notes to highlight some particularly intriguing responses without compromising the consistency of the study method (Seidman, 1991). I had the 14 interviews transcribed into text and then outlined the text as identified by the interview and respondent with individual line numbers in preparation for the data analysis.

Data Analysis

The analysis of the data, or interpretation and subsequent representation of the participants' responses to the interview questions, is inherently the

responsibility of the researcher and thus itself part of the phenomenological study (Corbin & Strauss, 1996).

> To arrive at explanations of phenomena, choices inevitably must be made from among innumerable potential conditions and consequences that confront the researcher. Those choices amount to the process of ordering that constitutes explanation, or analysis (Corbin & Strauss, 1996, p. 140).

These researcher choices will be addressed in the next section on limitations, but here the choices made by the researcher emphasize the nature of a phenomenological study and provide support for the expanded acceptability of more than one qualitative method as suggested by Atkinson (2005). For this investigation, phenomenological meaning comes from not simply the interview responses of the participants, but more from the researcher's ability to see the whole of the responses and to isolate and identify thematic issues that come from all of the data (Arminio & Hultgren, 2002; van Manen, 1990). Further interpretation of these thematic findings helps to create meaning and inform or guide our work (van Manen, 1990).

From a brief overview of my field notes, I identified key responses from the students and tracked additional supportive or confounding responses from the remaining participants. I read through each transcript multiple times and highlighted specific components relating to the guiding questions regarding the nature of and outcomes associated with student-faculty interaction. To better assist with the analysis, I developed working tables of summarized responses for each student participant depicted on the left column of the table, with each

interview question listed along the first row as the headers. This visual representation of summarized data provided me a means to view themes and groupings of responses that supported each other and provided the means to analyze the newly categorized responses.

Goodness and Authenticity (Validity)

Arminio and Hultgren (2002) offered the term *goodness* to identify what many qualitative researchers addressed as the parallel of the validity component associated with forms of quantitative research.

> What we know about the goodness of research does not come from authoritative objective truth waiting to be discovered, but rather from the understanding we gain when engaging in our work. (Arminio & Hultgren, 2002, p. 447)

My current work as a practitioner in undergraduate education, as an educator, and as a researcher is to gain a better understanding of out-of-class student-faculty interaction in a residential learning community. The new understanding gained from this study is intended to help guide practice. From a phenomenological research perspective, this notion in itself constitutes goodness or validity, which is derived from the research, not necessarily a position of subject authority (Arminio & Hultgren, 2002).

Furthermore, Arminio and Hultgren (2002) focused on developing a more appropriate means for language use that reflects their support for the use of *goodness* as the means for evaluating qualitative research.

> Goodness requires that elements of the meaning making process are illustrated; epistemological and theoretical foundations are linked to the selected methodology; and that the method of data collection and its analysis are clear, offering new understanding that leads to improved practice. (Arminio & Hultgren, 2002, p. 446)

Terms such as reliability, rigor, and validity are derived from positivist, empirical-analytical research and do not necessarily reflect the rich nature of many qualitative forms of inquiry and thus are not appropriate for evaluating the merit of this study (Arminio & Hultgren, 2002; Lincoln & Guba, 1985). Goodness is assessed through the theoretical framework, methodology or approach, data collection method, representation of the participants' voice, interpretation of meaning, and implications for practice (Arminio & Hultgren, 2002). Qualitative research studies that reflect goodness are essential to higher education "because good qualitative research brings voice and insight forward for all constituents living complex phenomena" (Arminio & Hultgren, 2002, p. 458).

Goodness has been assured in this study by my selection of sound methodological frameworks and my clear use of grounded methods of qualitative inquiry. This study provides a new voice and greater insight into the phenomenon of out-of-class student-faculty interaction.

Assumptions and Limitations

A major perceived limitation of most phenomenological studies, and especially the family ecology framework, is the premise that the subject and environment are interconnected and interdependent (Arminio & Hultgren, 2002;

Bubolz & Sontag, 1993). Therefore it is highly unlikely that any causal relationship can be formally identified. However, the rich experiences of these subjects have great meaning in their individual reflections and interpreted collective voice; and their behaviors have impact on the environment, which is inherently significant (Arminio & Hultgren, 2002; Seidman, 1991).

Additionally, the concept of subject participant in a qualitative research endeavor has impact on the study (Peshkin, 1988; Torres & Baxter Magolda, 2002). In this study, I was a member of the administration of the RLC and have had interaction outside the formal realm of the study with all of the RLC member participants. In my professional role, I was the person responsible for contacting all of the students by mail and informing them of their official admittance to the program. I was responsible for coordinating the academic and student affairs staff and programming including the initial assignment of their academic advisors. I identify myself as an educator, advisor, researcher, and administrator within the context of my profession. Consistent with the framework of the study, the researcher has impact on the environment and therefore influence on the study (Bubolz & Sontag, 1993; Peshkin, 1988). While preventative measures of third party participant selection, disassociation of any formal academic advising relationship, and informed consent were taken to limit the extent of my association with the participants, the formal relationship still had an impact on the study (Seidman, 1991).

I assumed in studying student-faculty interaction in the RLC that I could unravel some particular student experiences and share the rich nature of this

phenomenon by providing a voice to the participants' experiences with and from out-of-class student-faculty interaction. I also assumed that by the very nature of phenomenological research that my relationship with the participants and the institution did not taint the study, but rather provided a rich and consistent analysis of participants' responses to my interview questions (Rubin & Rubin, 2005; van Manen, 1990). Often seen as only a limitation from a positivist perspective, the researcher's relationship with the participants may have even enhanced the quality of responses (Seidman, 1991).

This is a single-institution study and only included one RLC within the institution, which does not provide means for generalization to all undergraduate college students. Additionally, I selected only traditional-aged college students who were in their second year of study in a natural or biological science major at the institution. Different students may have had different experiences in different majors, RLCs, or at other institutions.

By addressing the limitations of this study, I am attempting to ensure that this study is not interpreted beyond the bounds of these 14 student participants. However, the limitations are only a very small part of the overall investigation. In the next chapter I share the rich and meaningful experiences of these 14 students as they reflect on their out-of-class interactions with their faculty members. Additionally, I provide the group of students with a collective voice that gets at the heart of both the *nature* of and *outcomes* associated with student-faculty interaction.

CHAPTER FOUR - FINDINGS

This study was designed to investigate both the *nature of* and *outcomes associated with* student faculty interaction in a residential learning community. From a human ecosystems perspective, it is apparent that students interact with their faculty at two distinct levels as interpreted through four primary variables – frequency of interactions, quality of the interaction experiences, the intensity of interactions, and location of interactions. The residential learning community and other institutionally developed programs designed to increase student-faculty interaction were shown to have positive impacts on students in their academic, personal, and social development as well as their access to heightened-level interactions with their faculty.

This chapter represents the synthesis of the individual student responses within the framework of the study. I begin the chapter by briefly reviewing student-faculty interaction and the importance of this study to higher education. Then, I identify the typology of student-faculty interaction with particular attention to the two distinct categories of rudimentary-level interaction and heightened-level interaction. The next major section of this chapter reveals the students' perceptions of the impact that this student-faculty interaction has had on them from academic, social, and personal development perspectives. Students' perceptions of the role of their faculty members as well as their desired faculty characteristics are represented in the following section. And the final section addresses the structured programs at the university which the students' found to have particular meaning to both their student-faculty interaction opportunities and experiences. Special attention is given to the residential learning community that is identified as a cornerstone of this study.

Student-Faculty Interaction.

As discussed in chapter two, college students' interactions with their faculty members have been found to be one of the most significant influences in a college student's undergraduate experience (Altbach et al., 1999; Kuh, 2001; Pascarella & Terenzini, 1991, 2005; The Carnegie Foundation for the Advancement of Teaching, 1990). The most traditional form of student-faculty interaction is in the formal academic classroom environment. Most studies of this form of in-class student-faculty interaction have been focused on student learning. Students, faculty, and administrators are also realizing the vast impact on undergraduate students resulting from student-faculty interaction outside the realm of the formal classroom (Boyer, 1987; Cokley, 2000; Kuh, 1995; Murray State University, 2005; Pascarella & Terenzini, 1991, 2005). In this study, students were screened for having experienced an interaction with at least one faculty member outside of the formal classroom environment. During the interview, the students identified a wide variety of interactions with their professors including: attending office hours in the faculty member's office; talking outside in the hallway right after or right before class; meeting with the faculty member over a meal, both individually and in groups; communicating virtually through an instant messenger protocol; socializing through games of chess, volleyball, and basketball; traveling to an academic conference in the same passenger van; working in a research laboratory with a faculty member; or working as an undergraduate teaching assistant for a professor in a specific course. All of these interactions were conducted outside of the formal classroom period and environment, and at an interpersonal level in the form of a direct communication. With

one exception (direct instant messenger protocol), all primary levels of communication were in person and verbal in nature.

Each student-faculty relationship was unique and many students reported different relationships with different faculty. Many had no relationship with their other faculty members (outside of the faculty member that they identified for this study) at all. Each interaction experience contributed to the student-faculty interaction relationship and helped the student define the meaning of both the interaction and the encompassing relationship.

I grouped student participants into two primary categories – participants in the residential learning community and those not in the residential learning community. All students were in their second full academic year and majoring in a science field. The participants reflected a representative balance of demographic characteristics for undergraduate students in the study institution. Upon interpretation of the interview responses, I grouped the types of student-faculty interaction into two categories – rudimentary-level and heightened-level – pertaining to the quality, intensity, frequency, and location of the interaction(s). Students willingly shared information on their experiences with faculty including the type of interaction, location, frequency, nature, and perceived impact. The following section highlights these responses in detail and supports the establishment of these two levels of student-faculty interaction.

The Typology of Student-Faculty Interaction

Two distinct levels of interaction (rudimentary-level and heightened-level) emerged from the analysis of the interview data. The rudimentary-level interactions tended to occur as needed at random intervals with low frequency and structure. These

interactions tended to be focused on in-class issues, very brief in time interval from a few seconds to a few minutes, and often occurred in the faculty member's office or just outside the classroom. Heightened-level interactions happened with greater depth of interaction and complexity, with much greater frequency, typically with systematic regularity, and often in locations other than just outside the classroom or in the faculty member's office.

Four distinct variables – frequency of interactions, quality of the interaction experiences, the intensity of interactions, and location of interactions – associated with student-faculty interaction outside the formal classroom help to characterize the typology of interaction for this study. The *frequency* is characterized by the number of times the students interact with their faculty member in a given time period. In this study, students were interviewed in the fall of their sophomore year, so they had only two full semesters to reflect upon when contributing to the interview responses. The frequency also reflects the regularity of the interactions whether systematic or scattered. For instance, a student could meet weekly with the faculty member during his or her regularly schedule office hours, or if a student is working 10 hours a week in the faculty member's research laboratory, there may be a structured time frame and a certain amount of repetition in their interactions.

As identified, the term *quality* encompasses a wide variety of variables and is not as easily defined. In this study, the quality of interactions reflected more upon the nature of the interaction rather than the associated outcomes. Quality is individually defined by the shareholder and can be assessed at any given point of time (vanderHeyden, 2001). For this study with the student as the shareholder of interest, quality refers to the perception

the student had of both the individual interaction experience with the faculty member and in some cases the ensuing development of a relationship. It is the rich student-defined meaning of the experience that determines quality as revealed later in the chapter through the direct words and interpreted group voice of the student participants.

The *intensity* of the interactions was readily apparent throughout the interview process as students described their interactions with their professors. In some instances the frequency of interaction was high and on a regular basis, but never developed past the classroom subject matter. These student-faculty interactions were much more an extension of the classroom in a different setting with fewer students. Other students reported that with each interaction the relationship evolved whether within the confines of the subject matter or into other areas of personal interests, hobbies, family, sports and recreation, or current events. These latter examples reflect a growing intensity of experience through increased passion and concentration or even the depth of the interactions. Intensity of experience also reflects a transition from a single or a small group of interactions into a conglomerate or combined experience. Multiple visits by a student to the faculty member's office with no development into deeper-level interactions were determined to be high quantity, but low intensity. As the content of the interactions expanded or grew in depth and complexity, then the intensity was determined to be high. Additionally, *intensity* reflects the time on task variable. Many students reported interactions ranging from a quick thirty second question after class to a full weekend conference including a four hour van ride to the conference facility. The rich examples of *intensity* of student-faculty interactions are described by the students throughout this chapter.

The final characteristic, *location*, refers to the site or setting of the student-faculty interaction(s). Immediately outside the entrance to the formal classroom and the faculty member's office were readily recognized as sites for many student faculty interactions. As the interviews progressed with students sharing more than one interaction, the locations of these interactions expanded into locations such as research laboratories, regional conference facilities, local dining establishments, and coffee houses; and thus developed into two distinct categories described in detail within the two levels.

Given these four distinct categories, I have developed a basic typology of student-faculty interaction at two distinct levels – rudimentary-level interactions and heightened-level interactions. The next section will expound on both levels and provide concrete examples for each type.

Rudimentary Level of Interaction

Rudimentary-level interactions happened at random intervals with low frequency, tended to be related to immediate in-class issues, were brief in time interval, and tended to occur in the faculty member's office or just outside the classroom. They included such events as visiting the faculty member during office hours, meeting with a small group from class and the faculty member outside of class for a class project, seeing the faculty member in public places (hallway, courtyard, cafeteria, etc). CZ, Jennifer, Joe, and Michelle described rudimentary level interaction with their faculty.

As CZ explained, "I am really not big on office hours, but I have gone a few times.... Bio(logy) is pretty self-explanatory." Her focus is directly related to the class, and outside of class interaction is defined for her by what is happening in class. CZ's

premise defines office hours of the faculty as being only for issues with understanding the course material, and thus quite rudimentary.

Jennifer's interactions with one of her faculty members were different from CZ's, but shared some of the same rudimentary-level defining characteristics.

> I needed to leave early for Thanksgiving and I asked her if I could take the quiz before ... so I could leave earlier that day. And so she let me take the quiz in her office, and she is just very nice, and very willing to help the students.

As with CZ, the interaction was directly related to the class, and did not extend to any further depth, repetition, or even topic.

Joe recognized the opportunities for interaction with his faculty.

> I see that they do have office hours and all that. It is usually the (RLC) classes that I'll come and be more close to my teachers. For some reason it is just my style of studying is that I am better at teaching myself from the books.

Joe's out-of-class interaction with his faculty member was well defined by his definition of his faculty as a "teacher." Joe's experience with his professor outside of class is related directly to a specific classroom learning module. The significance of the word "teacher" as identified by Joe will be discussed in greater detail later in this chapter.

The frequency of Michelle's interactions with her faculty member was much greater than her peers in this level, which may eventually lead to a more meaningful level of interaction; however the quality and intensity of the interaction remained at a constant level relating to an academic project within the specific class.

> I used to do Honors Options for physics, and it was to help in the Help Room. So we, of course, interacted with the faculty to tell them how it's going. Even if we

weren't necessarily telling them how it's going, I had a few questions about our homework, so I interacted with him outside of class.

While the frequencies of her interactions with her professor were higher, the complexity and meaningfulness of the interactions remained at the same rudimentary level as the content of the interactions were purely related to the classroom topics or roles.

The primary locations of these interactions were immediately outside the formal classroom, in the faculty member's office, or in a common-use public lounge associated with the academic facility. On the surface this might not appear as significant, but when measured against the locations for the heightened-levels of interaction, it is clear that there is a distinct difference in settings for the two identified types of interactions.

Heightened Level of Interaction

Heightened level-interactions happened with greater frequency, regularity, and depth of interaction, and often at sites other than just outside the classroom or in the faculty member's office. Examples included part-time work or laboratory research, study abroad programs, and out-of-class social activities (chess, basketball, pool, lunch, etc). Fern, Randy, and Alex all reported these heightened-level interactions with their faculty.

Fern was awarded a Professorial Assistantship (PA) scholarship from the Honors College to work individually with a faculty member to conduct research for her first two years at the university. When reflecting on her interactions with her faculty mentor, Fern commented the following.

So I guess (my professor) is another huge interaction. I mean I deal with her all the time pretty much.... When I started working in her lab, I knew pretty much

nothing about anything because I was a freshman, and she wanted me to do some pretty heavy-duty research from the get-go. So she wanted me to know a lot about neurobiology, because that's what the research was regarding. So I enrolled in a zoology course with her as the professor.

When I probed her to share more of the experience, she readily continued to discuss the heightened-level of her relationship with her faculty mentor.

> So now, I mean I've known (faculty first name) for a long time and I worked with her for almost two years. I moved (to campus) over the summer. I lived just in an apartment for the sole purpose of working in her lab. I could get a bunch of work done. So I spent a lot of time with her and now we've kind of reached the point where if I have – if I need advice about anything, that's not even science related – I can talk to her about it. So she's not like my mom per se. But like she — she's pretty much the person I go to here.

Fern's interactions with her faculty mentor have developed into a much deeper relationship beyond the basic academic classroom interactions. It is important to note here that this relationship started out of a structured program and did not evolve through a formal classroom experience. I will discuss this pathway to heightened-level interactions later in this chapter.

Randy's interactions with his faculty member actually evolved out of a classroom experience and general use of the faculty member's office hours. They started as academic out-of-class assistance and developed into a more social experience. "I played chess with (my professor). We just played right in his office... The first one we had timed for 10 minutes because both of us have pretty busy schedules." After sharing

subsequent experiences playing chess with his faculty member, Randy went on to show how the relationship has evolved. "We will just sit there (in his office) and chit-chat about things. He teaches an upper-level class next semester... and I think I am going to take that class." Randy's interactions with his professor were more frequent and were outside of the realm of the actual course in which he is enrolled. The social impact component, as defined by the student, emerged from this interaction and helped classify this as a heightened-level interaction.

Alex has participated in two Study Abroad programs – the first being just before the beginning of fall semester freshman year to Ireland.

> While we were in Dublin, we had to write journals every day, and we had to go to class three days a week. And the University (of Dublin) set aside a classroom for us. And there were – the two different professors taught two different tracks. And in mine we learned like why Dublin is a cool city. Why there are so many young people there as opposed to Detroit's losing young people every year. And – but once we left Dublin, we went to Galloway and we had no classroom activities. It was just like field trips and stuff like that. Just to experience it. And then we had a final exam where we had to write five essays.

Reflecting on her second study abroad trip, this one to South Africa, Alex commented about the multiple roles of her faculty.

> There was only one faculty and there were seven students. We traveled around in a van. And all of our interaction was with our professor because we toured all around South Africa, and he's been eight times – for the past eight years.... He was our tour guide. He was our driver. He was ... everything.

It is easy to recognize the depth and frequency of the interactions on a program like this. While Alex distinguished the formal classroom component of the study abroad program, it was still difficult for her to separate the experiences into in-class and out-of-class interactions as the whole program was a learning experience. It is important to note that the National Survey of Student Engagement (NSSE) (2005) is often viewed as one of the primary sources for data on college student engagement, learning, and outcomes assessment (U. S. Department of Education, 2006). However, due to the nature of survey research, it is difficult for the NSSE to provide the insight into the nuances of how students perceive their relationships and interactions with their faculty members. It is through the rich responses from the students that I am able to address this phenomenon.

From these examples, it is apparent that there was a distinctive dividing line between the rudimentary-level student-faculty interactions and the heightened-level interactions. The rudimentary-level interactions tended to occur as needed at random intervals with low frequency and structure as highlighted in the responses from CZ, Jennifer, Joe, and Michelle. These interactions tended to be focused on in-class issues, very brief in time interval from a few seconds to a few minutes, and often took place in the faculty member's office or just outside the classroom. As reported, the heightened level-interactions happened with much greater frequency, typically with systematic regularity, and much greater depth of interaction and complexity. Fern, Randy, and Alex all shared moments of complex interactions with faculty often with regularity and high frequency. Table 2 outlines the variables associated with defining the typology student-faculty interaction into the two categories of rudimentary and heightened levels.

Table 2 – Typology of Student-Faculty Interaction Variables

	RUDIMENTARY	HEIGHTENED
FREQUENCY	Low to mid	Mid to high
QUALITY	Low	High
INTENSITY	Low	High
LOCATION	Office, hallway	Laboratory, coffee house, etc

It is important to note here that in this study students were asked to comment on a particular faculty member of their choice with whom they have experienced an out-of-class student-faculty interaction or multiple interactions. In defining the typology of interaction these students' responses were used exclusively to define the rudimentary and heightened levels. These students may have experienced different relationships with other faculty not mentioned in this study, and some students may have had no out-of-class interactions with other faculty. It is plausible that students may be in different levels of interaction with different faculty at different times throughout their undergraduate program. In the next section, I reflect upon these students' progression through the levels while introducing the formal classroom as a means of entry into out-of-class student-faculty interaction.

Students' Progression to Rudimentary and Heightened Levels.

With the two levels, rudimentary and heightened, clearly defined, it is appropriate to report on which level each student was in at the time of the interview and more specifically how each student entered into this out-of-class student-faculty interaction.

Table 3 – Students' Progression through Student-Faculty Interaction Levels

RLC	SEX	Student Name		Classroom Foundation		Rudimentary Level		Heightened Level
No	F	Alex						Alex
Yes	F	Anna	→	Anna	→	Anna	→	Anna
Yes	M	Ben	→	Ben	→	Ben		
No	F	Brooke						Brooke
No	F	Christina	→	Christina	→	Christina		
Yes	F	CZ	→	CZ	→	CZ		
Yes	F	Fern						Fern
Yes	M	Jeff	→	Jeff	→	Jeff		
Yes	F	Jennifer	→	Jennifer	→	Jennifer		
Yes	M	Joe	→	Joe	→	Joe		
No	F	Michelle	→	Michelle	→	Michelle		
Yes	M	Randy	→	Randy	→	Randy	→	Randy
Yes	F	Sara	→	Sara	→	Sara		
Yes	M	Steve	→	Steve	→	Steve	→	Steve

Table 3 displays the students' progression through their out-of-class interactions with their faculty. I have identified Sex and RLC membership as the two primary student demographic variables in relation to the students' progression through or to the levels to be consistent with the format of Table 1. Of the five male students, all were members of the RLC, and all initiated their interaction with their faculty through an initial classroom relationship. In essence, they first met the faculty member as their classroom professor in the formal classroom environment. All five men initiated a student-faculty interaction with their professor outside of class at the rudimentary-level. Randy and Steve, as initiated by the faculty member, were able to develop their student-faculty interactions up to the heightened-level. The other nine participants were all women. Five of the nine women were members of the RLC. Four of the nine women – Fern, Anna, Brooke, and Alex – developed heightened-level student-faculty interactions. Of these four women, only Anna worked her way through the classroom and rudimentary-level interactions

before developing the heightened-level interaction. Fern, Brooke, and Christina all entered the heightened-level through institutionally designed programs. This interesting finding is discussed later in this chapter. Also of interest is the notion that of the four non-RLC members, none developed a heightened-level interaction through the route of the classroom and rudimentary-level interactions.

The placement into these two distinct levels explains part of the *nature* of student-faculty interaction. I expand more on the nature of the interactions throughout this chapter and in the next chapter. Students, through a series of specific questions, also reported the *outcomes* of these experiences. (The two guiding questions for this study are to study the *nature of* and *outcomes associated* with student-faculty interaction.) The first reported outcome that I discuss is the students' perception of the impact of these interactions on their academic, social, and personal lives. It is important to note that as the interviewer, I did not provide the students with a specific definition of academic, social, or personal, but rather allowed each student to interpret the term for him or herself and respond accordingly.

Student-Perceived Outcomes of Student-Faculty Interaction

When asked about the impact of their interactions with faculty, students addressed three targeted areas of academic, social and personal impact. The latter two areas, social and personal, tended to blend together as reported by the students, while the academic component, including career development, was more individually distinctive for most of the students.

Academic and Career Impact

Students reported that they felt more "comfortable" approaching their faculty members, and were "not afraid" to initiate a conversation as directly and indirectly attributed to their out-of-class interactions with their faculty member. Once the students interacted with their faculty member, many reported decreased feelings of "anxiety" and a lesser feeling of intimidation. This resulted in students feeling more "confident" in their work, and having a desire to "work harder" for the course. Subsequently, they felt more "accountable" and willing to give a greater effort because they felt they had a greater invested interest in their academic performance. They perceived the faculty member as having greater expectations of them because of the personal interaction outside of the classroom. They even commented on enhanced learning as both direct and indirect outcomes from their interactions with their faculty.

Students commented on breaking the initial barrier of interacting with their professors for the first time and how the positive first experience led them to feel good about interacting with their faculty. Sara opened, "You're more comfortable asking them questions when you have them. And it helps a lot to be able to go to someone when you know them." For Sara, the initial interaction with her faculty member led to more interactions and her feeling empowered by the interactions.

In discussing his first interactions outside of the classroom with his professor Randy added, "just because he's so willing to meet with you outside of class. But he's not, you're not like afraid to meet with him, you know," in response to a question about why he chose to interact with his professor outside of class on subsequent occasions.

Ben's comments were similar to in nature to what Randy said, but he took it one step further by discussing his feelings about the interaction.

> Well, it's definitely helped academically, because like if you have a question about something, then you don't feel any anxiety. Actually I don't (feel anxiety when) going up and talking to the professors after class or before class or sometime when they're in the office. So it makes it easy to ask questions and get answers quickly.

His first interaction with his professor was full of doubt, uncertainty, and anxiety. In subsequent interactions, Ben had reduced his anxiety and increased his interactions with his professor on classroom related issues.

CZ was also initially intimidated by her faculty member, "Because it – it's kind of scary when they're up there talking about everything. Oh, she's so smart. But they actually do want to help you." She soon found out that her professor was primarily interested in helping her learn the course material.

> Actually it has made me a little more confident knowing that you know, I can rely on them to help you, and knowing that if you are having a problem, it's getting it solved. Whether they tell you here, here are some tools (and) you can do it on your own, or if they sit there and actually help you through it, it makes it a lot less intimidating as far as class, and something you don't really understand. And your friends don't get it, you know, this and that. You know, they (faculty) are a lot more approachable.

CZ believes that since she has interacted with her faculty outside of class, she has become a much more confident student. Cokley, Komarraju, Patel, and Castillion (2004) in

developing and validating the Student-Professor Interaction Scale, assessed nine sub-factors of student-faculty interactions and found that the interactions positively correlated with students' perspective of faculty approachability, comfort in asking questions, and value for students.

Christina added,

> I feel that if they know me like on a first-name basis, that I'm going to work harder in their class and I don't want to like, you know, sit there and just goof around and stuff because they do know who I am, and they're like okay, you know, you visit my office hours, you spent time on this, so why don't you want to learn?

As Christina continued, she reflected more into her perception of her professor beyond the basic classroom teacher role.

> It actually – and becoming close with (my professor) has kind of made me realize that they're people, too. You know, and it doesn't really put it like on a teacher-student basis. It's like, you know, well, I'm trying to do the same thing here... Trying to learn.

As a direct result of interacting with her faculty outside of class, Christina is putting forth a greater effort in the classroom and with her overall educational goals. Pasque and Murphy (2005) studied students in RLC programs at a similar institution and also found that academic achievement and intellectual engagement to be positive outcomes of participation in a RLC on their campus.

Accountability and an increase in efforts toward the students' performance in class were direct results of student-faculty interaction. Jennifer commented on how she was feeling about her course after meeting with her professor outside of class.

> Academically I think it makes you feel more accountable for your work in the class. If you know that they know you're name and they can associate like – you just don't want your name attached to a piece of paper that is of poor quality. So you don't want to – you feel more accountable for your work if you know that the professor knows who you are. And you're not just an anonymous student.

Randy added

> When you have someone that's really willing to help you out, and you don't really have to go all the way across campus to do it, I'm a lot more likely to actually just go down there, personally. And, well, with (faculty), he is probably the best teacher I've ever had.

Beyond the value judgment of this particular faculty member being his "best teacher," Randy was reflecting more on the feelings that he had to work a bit harder in the class and to be a bit more productive. Whether those feelings were derived directly as a result of the interactions with his professor or as an indirect response to feeling accountable, the end result is still a propensity for these students to put forth a greater effort in class.

Reflecting on the impact of working with her faculty mentor in her Professorial Assistant (undergraduate research assistant) position, Brooke shared these thoughts.

> When I first started (working for her faculty mentor), I knew that I was learning backwards because they always say you learn it from a book, and then you really learn it when you do it. And I am trying to do it and understand the biochemistry

> behind it is actually happening and had a good grasp on it. I actually took a biology class (last semester) and it is everything I have already done (in my lab with my faculty mentor).

Brooke went on to add, "[S]o it was a breeze, and it's nice to know what's going on and you learn in a different way." In this reflection, Brooke was sharing an experience of her applied learning in the laboratory as her first exposure to the topic, then enrolling in the required course and reinforcing her knowledge from a more traditional method of instruction and academic validation through formal course enrollment and the grading and credit systems.

As stated in chapter two, student-faculty interaction outside of class had a significant positive impact on career decision making for undergraduate students (Astin & Astin, 1993; Eimers, 2000). The students in this study supported the career development research with their comments relating to the impact of their student-faculty interaction experience(s). Brooke's experience with her faculty mentor has had some significant implications on her career aspirations and career decision-making process.

> Well, personally I guess the first part I realized was really going to like affect my career was when I was looking further and further into like forensics and homicide detection. And realizing that I knew a lot of techniques they used. You know. I was like wow, cool. It's a good thing.

Her laboratory research experience with a faculty member is well above and beyond the typical academic classroom experience of an undergraduate student. She continued, "So that was really exciting, because I understand. Like, I can watch those ridiculous TV shows and understand what they're doing. Instead of just, you know, popping things in

the machine and getting a quick answer." Brooke was able to reinforce her understanding of her chosen career path through out-of-class student-faculty interaction and readily acknowledged the importance of the interaction to this level of learning and understanding.

Anna reported that her professor was a tremendous academic mentor and more specifically a role model for her career path in the professorate. "I actually had an interest in possibly being a professor and I think a lot of that is because of, you know, the great professors that they've had here." Most of the students interviewed had a very clear picture of their intended career path as well as their current major choice. Anna knew she was interested in studying the rainforest, but her experiences with her faculty have shed a new light on how to incorporate her new appreciation for research and teaching in a college or university environment. Ben wants to be a high school science teacher in part because of the modeling of some of his faculty. "I just like to see their real enthusiasm to teach. And that's actually one of the main reasons why I want to go into teaching – because that's the viewpoint I have."

Social and Personal Impact.

Beyond the academic and career impacts of student-faculty interaction, students were also asked if there were any impacts from a social or personal perspective. Overwhelmingly, every student indicated some aspect of a social or personal outcome from the experience ranging from building their confidence to help them approach other faculty to developing a meaningful mentoring relationship in preparation for an academic career. In many instances, students reported examples of meaningful personal experiences.

Alex has participated in two Study Abroad experiences with faculty members as program coordinators. While describing the role of the faculty member in relation to the study abroad program, she commented that he "was our tour guide, he was our driver, he was everything." So in describing her overall experience with the Study Abroad program, Alex is reflecting on her interactions with her faculty member. Reflecting on one of her Study Abroad experiences, Alex shared how she felt the experience impacted her personally.

> We got to interact with so many people, and like I love experiencing other cultures. That – I was bitten by the traveling bug early, and I don't plan on stopping. *(Laughing)* And it's just getting to interact with people. Like people in South Africa who have only been free for eleven years. And like they're still having struggles. They have eleven official languages for God's sake. *(Laughing)* And it's just like we in America think that, you know, think so differently of the outside world than actually what it is. So it just gives me – I think it makes me like more knowledgeable about things that are abroad. And like going to war with countries just because we don't understand them, and that kind of stuff.

Through her interactions with her faculty member in this special program, Alex expanded her mindset into a global or international perspective on issues of culture, language, religion, politics, and war.

Brooke's relationship with her professor was built out of the research laboratory experience from the Professorial Assistantship program. When asked of the social impact of the experience, she responded, "Socially, yes. My best – some of my best friends came from working in labs. Same passions. Same interests. Obviously, we're all stuck together

in the lab for hours and hours on end. So I've got that." Fern is also a research assistant through the Professorial Assistantship program. She commented on her social relationships as a factor of her student-faculty interaction. "Because I don't get to do things with my pre-med friends as much because I'm working so much." Commenting on her faculty mentor's impact Fern continued,

> But then, she, in terms of like helping me forge a relationship, we have probably four other undergrads and then one graduate student who works in the lab. And I guess the way she picks the people – like they all have these personalities that are just so – they work so well together. So we're really – we're all pretty good friends. And we don't see each other too much outside of work. But when I went down to Chicago with (another faculty), I also went with the graduate student in my lab, which is fantastic. And she kind of – she's helped me a lot. Just getting an idea of what graduate school is like.... She's been to the house a couple of times. And yeah. So kind of mild social relationships.

In Fern's situation as with Brooke, work relationships become social and personal relationships. Students readily admit that it is often because of the small team of people working toward the same goal, but still social relationships developed and have had significant impact on these students.

Christina viewed her experiences as having a profound impact on her personal and social development. Referring to her faculty member she commented,

> I think it helps me mature because like they're older than me. They've gone through more things. They have experienced maybe things that would help me to know about them before I experience them, or maybe not experience them at all.

She tends to try to get to know her professors socially and personally – especially if they have a life experience that piques her interests. She will often meet her faculty for lunch or coffee just to chat and to learn as much as she can about their experiences.

Anna also went to lunch with her faculty.

> She and I go out to lunch every once in a while. I don't really think of her as like a professor, because we're more friends. But yeah, she is – she's just amazing. She's an anthropologist and she's done studies and traveled and she does a lot of charity work. Like for Hurricane Katrina she spent like three or four days just sorting food for the victims. And she and I, we email back and forth and we go out for lunch every once in a while.

When asked to elaborate on the types of conversations she has with this faculty member Anna continued,

> Both of us are really like charity-minded and we talk about like, especially like with Hurricane Katrina we spent a lot of time talking about like the mistakes that were made, and how you know, how they needed to correct them and stuff that she's involved in. Like I love hearing about those things that she does.

These students view the lunch or coffee shop meetings as extremely personal experiences with tremendous meaning and impact on their personal development. Similarly to Alex, Anna has developed her social justice, political, and community conscience either directly or indirectly due to her out-of-class interactions with her professor.

Jennifer and Sara reported that the feeling of ease, comfort, and access to their faculty had an impact on them socially and personally.

It makes the (RLC) because you live so closely to where your professors work. And it makes you feel a little more at ease knowing that you know, if you see them in the hallway, they'll smile and wave rather than be like I don't know who you are. So it makes the community feel more open and friendly,

said Jennifer. This reflection was focused on the RLC experience which will be discussed near the end of this chapter, but it merits notation here. Sara continued in the same thematic frame.

As a person. I think I've become somebody that's (pause) something I see – I feel more willing to be nicer to just other people in general. Whenever somebody lends a hand, then you feel as though it encourages you to do the same to anybody. So having her be so willing to help me, makes me want to be more willing to help your own students or be more willing to help your own classmates.

This impact has spread from her individual interaction with her professor into a broader community based impact. Sara viewed this student-faculty interaction as grounds for a longer standing personal and social relationship.

Well, it just makes it a better like support network, and also it's just good to know people when you're going up and out. Just try to get into research positions, or get letters of recommendation in order, or just be able to say hi in the hallway even.

While these students commented on individual interactions, it was readily apparent that there was a means for continued interaction with these specific faculty members, a greater propensity to interact with future professors, and a greater likelihood that the impact will be broader reaching.

It was definitely challenging as an interviewer to get the five male respondents to go into greater depth about the social and personal impacts of their student faculty interaction especially in comparison to the nine female participants. Many of the comments were very surface level referring to whether they liked their professor or though they were "nice." Randy commented,

> I think he was a new teacher last year, and (I) just randomly got him. And he ended up being one of my favorite teachers... Like I always have a good time (visiting with my faculty member). I can even go down there, and chitchat with him. Like occasionally I'll just be walking by, coming from class, and I'll just stop in and we'll, we'll talk for 10 or 15 minutes, just see what's going on with each other. And, you know, I really like him.

Steve added a little more depth to his understanding of the student-faculty relationship. "I always think it helps like instead of seeing them as just giving information all the time, it's like kind of getting to know them and seeing their personality and different things."

I do not necessarily interpret their lack of detailed and potentially more meaningful responses as a reflection of their experiences per se, but more of the inexperience of me as an interviewer in probing for more substance from my initial questions. Nonetheless, it is quite apparent that these students were significantly impacted by their student faculty interaction experiences. Christina summed up the academic social and personal impact of the student-faculty relationship experience well when she stated, "it's just kind of – it's helped – it helps make me a more well-rounded person I think."

For these students, interactions with faculty have provided them with significant positive outcomes. A few of the respondents had very high expectations of their faculty for this individual and out-of-class interaction. To gain a better insight into how these students perceived the actual roles and responsibilities of their faculty, I incorporated specific questions addressing both the students' perception of their faculty position requirements as well as their preferred function of the faculty. The next section highlights the students' responses.

Faculty Roles and Responsibilities

All students in this study were actively enrolled in the same land-grant, doctoral granting, research-extensive university. Faculty members at this institution were responsible for research or scholarship, teaching, and service to their discipline and academic community. All 14 students identified their faculty members as being responsible for teaching in some form. Alex stated,

> I think their responsibility is to like present the material as clearly as they can. And then to be available for extra help if somebody needs it. Like in the classroom you can't make it so everybody understands, but you should be available to make people who don't understand comprehend it.

Ben added simply, "For me, professors are here to teach."

Most of the students described characteristics of a good teacher building off of their prior understanding of the role of their high school teachers. Alex wanted her professors to be "nice." Anna wanted them to be "organized." Brooke emphasized their need to be "clear." Christina wanted them to be "compassionate." CZ required "open(ness)." Fern expected faculty to be "helpful" and "professional." Jennifer desired

them to be "efficient." And Michelle expected them to be "prepared." These one word summaries emphasize the desired teaching and classroom management perspectives that these student participants reflected upon in describing their preferred job description of their faculty.

Nearly all of the students commented on how they wanted their faculty to be available and accessible to them for individual or small group assistance. Joe explained,

> I think it's, that their role is to be there pretty much for the students whenever they're needed. And not necessarily, as far as outside interactions out-of-class, they're not necessarily supposed to, you know, they don't have to be friends, I mean. But it's probably a good thing; the more personal they are with the students and all that. It probably helps, you know, the students feel a lot more comfortable coming up to them and overall the student might learn more.

Anna added,

> I think professors have a responsibility to be there for any student, within reason, for any student that is struggling. I don't – like I think that anyone should be able to get a four point (grade on a 4.0 scale) in any class if they really sit down and try hard. And they should have the resources to do so.

Caring and compassion for the individual student was also a prevalent theme throughout these interviews. Jeff stated, "First, what I believe a professor should accomplish here: to care about the students more than they care about the education." Randy expressed his expectations of the faculty member's responsibility to individual students.

Well, I think they should be there for their students to, like when a student has a problem. It's, you know, I'm sure there's a lot of people out there trying to just get by with an excuse, but when someone has like a real problem, like when I had the mono. I mean having someone that's really willing to go out of their way to help you and in understanding of like an illness or something that happens to you.

Christina continued on the theme reported by her peers focusing more on the social and personal responsibilities of the faculty to their students. Faculty should

help those students walk away not necessarily smarter, but better people. Like more compassionate about our society. Like I don't care if you're even teaching math, like add something to that classroom and bring (students) together and help make some of them friends.

Christina went on to share her thoughts on some of the negative perceptions of faculty.

Like a lot of the professors care just like well, I just have to go here for 50 minutes, teach this material and leave. And I just feel like we're paying a lot of money to go and get an education. You know. That's not really education. It's just fact, fact, fact, test, test, test, and then a grade. You know? So I just feel like, you know, care about us. Be available. Be dependable. Be willing to listen to us and maybe make changes in how you teach in order to help us learn better.

Jeff added, "It means a lot to me personally to see that a professor really seems to care about us rather than sit up there (in the classroom) preaching and leaving."

Fern went into great detail when asked about the roles and responsibilities of her faculty from both a teaching and a research laboratory mentor perspectives.

> They should just be very willing to help students (learn). Like that should be a huge priority for them really. So I realize that's a problem a lot, because lots of people like to do research and have their side thing be teaching. But I really think we need people who are really enthusiastic about (us).

CZ commented, "I think their main priority would be to not necessarily keep the students interested in their field, but to make them think about it." Jennifer expanded the roles of faculty and defined them more broadly as educators focused on helping students learn. "Just – their position – any educator, it's their job to teach them both socially and academically, and they shape them – they're primarily the adult contact throughout the day."

Of the 14 student participants, only five reported that their faculty member was responsible for research endeavors. From these five, research was always described in balance or secondary to their teaching responsibilities. Ben responded,

> Well, I, the research part, like I'm not as familiar with it, cause well, I haven't been exposed to it. I know they're here to research and I, somehow, actually, I don't know how they get all their research done, (be)cause they have to split their time with students and, students and teaching. But no, I just like to see their real enthusiasm to teach.

Jeff commented about the research role of his faculty but mentioned that it should be in conjunction with undergraduate students.

> It is also great when they are willing to incorporate their students into their research and provide opportunities. I know (a professor in the RLC) had five

students (in the research laboratory) and I think it is great to have that opportunity.

Of the six students evaluated to have had heightened-level interactions with their faculty, only Brooke and Anna reported that the faculty member's position description required research endeavors. Anna had a good understanding of the role of research in the university, but she would prefer that the role of teaching remain a priority for her faculty.

> I don't think that researcher should ever come before teaching. But I know that a lot of professors would disagree with that. Like any student, that would be the optimal. I don't think research should come before teaching in any situation. But a lot of the professors that come into our labs would definitely be angry if they heard me say that.

Brooke and Sara both commented on the role of faculty to acquire grants to support research endeavors. In commenting on the role of her faculty mentor, Brooke briefly described the administrative and professional responsibilities beyond helping her "prepare for the real world." She continued the thought stream,

> and to get like both a big picture view and a detailed view of – big picture of what's going on, and details, like my particular project. I don't know. I guess I expect her to get grants so that we can keep working for her.

These students' expectations of their faculty were very real and predicated by their prior understanding of their previous educators – namely their high school teachers. With very few exceptions, these students equated their college faculty with the solitary role of teaching. Golde and Pribbenow (2000) interviewed 15 faculty members involved with RLCs and identified some wide ranges of the faculty members own misconceptions

of their roles within the RLC and institution in conflict with student expectations. As with the Golde and Pribbenow (2000) study, the roles and responsibilities of faculty in the RLC are important, but do not exist in isolation of the greater university structures including the obvious departmental and college structure in the university. The next section addresses the organizational and intentional designs of university programs developed to create enhanced opportunities for student-faculty interaction.

Programmatic and Institutionally Designed Opportunities for Student-Faculty Interaction

This study was designed to investigate the *nature* and *outcomes* of student-faculty interaction with specific interest on residential learning communities. As noted throughout this chapter, there were overwhelmingly positive comments from students about the benefits and added value of the RLC on student-faculty interaction; I was surprised to notice two other types of structured programs – the professorial assistantship program in the honors college and faculty-led study abroad programs – that also were perceived to have significant impact on students in this study. From the conceptual framework of this study, these *human-built environments* (Bubolz & Sontag, 1993) or *exosystems* (Bronfenbrenner, 1979) are integral in understanding the *family ecosystem* (Bubolz & Sontag, 1993) or *microsystem* (Bronfenbrenner, 1979) that is represented by each instance of student-faculty interaction. This section will focus first on the Professorial Assistantship Program through the Honors College and the faculty led Study Abroad programs, then transition into the primary focus on the residential learning community.

Professorial Assistantships in the Honors College.

Another human-built environment, the Honors College and more specifically its Professorial Assistantship (PA) program, created a formal structure whereby academically talented first-year students were paired with faculty to participate in or conduct research in an individualized and supportive environment. Student participants were selected for this program based on pre-college measures including SAT/ACT (college entrance examination) scores and high school grade point average. In general, participants in the PA program represented the top 1% of high school graduates. The program is designed to be somewhat of a mentoring experience for first and second year students with their selected research faculty member. While based on an academic theme, the experience itself created increased student-faculty interaction that led to increased outcomes associated with heightened-level interactions.

As a participant in the Professorial Assistantship program, Fern shared her perspective on her relationship with her faculty mentor.

> So I guess (first name of mentor) is another huge faculty member I interact with. I mean I deal with her all the time pretty much. So when I started working in her lab, I knew pretty much nothing about anything because I was a freshman. And she wanted me to do some pretty heavy duty research from the get-go. So she wanted me to know a lot about neurobiology, because that's what the research was regarding. So I enrolled in a four-hundred level zoology course with her as the professor. And it was really strange – it was a strange thing because when I'm in the lab with her, I call her (by her first name). But in class I call her Dr. (last name) because I didn't want it to seem weird.

When reflecting on the impact of the experience, Fern stated, "Now I think I kind of want to be like her. You know, and research and teach as well. And I want to do (research) something different than her, but still be like her."

Another participant in the Professorial Assistantship program, Brooke, added her thoughts on her faculty mentor.

> I'm a professorial assistant, and I work with my mentor. Basically I ask her how to do things, and she tells me the direction I'm suppose to go in, and teaches me lab techniques and I'm pretty much on my own. The work I've got – I work – at the first maybe six weeks or so with other undergrads and graduates, you know, just learning techniques. And then she sat me down and we probably talked for about an hour and she gave me a specific project, and she explained all the science behind it so that I would know what I was doing and understand what was going on. And thankfully we do that – we do that every time we change directions with a project. We usually sit down for like twenty minutes to half an hour and just make sure that I know what I'm doing so that I don't go mess things up and cost her money. *(Laughing)* I mean, so I understand what she wants and what she's looking for.

Reflecting on her mentor's role, Brook expanded,

> Yeah. Well, she spends a lot of time, you know, like in her office reading, writing, looking for grants, and all that kind of stuff. It's mostly asking each other questions actually in the laboratory. And then if the lab technician doesn't know, we go ask her and, so for techniques and stuff, it's more the other undergrads with first goals and I really don't know the word.

When reflecting on the impact of the experience, Brooke continued,

> Socially, yes. My best – some of my best friends came from working in labs. And, personally I guess the first part I realized was really going to like affect my career was when I was looking further and further into like forensics and homicide detection. And realizing that I knew a lot of techniques they used. You know. I was like wow, cool. It's a good thing.

These two students emphasized the powerful impact associated with this relationship as defined by the PA program. While I intended to primarily study the influence of the RLC on student-faculty interaction, the discovery of the PA-Faculty Mentor relationship was a welcome addition to the study and merits further investigation outside of this study.

Faculty-Led Study Abroad Programs.

The Study Abroad network of over 160 different programs on all seven continents helps connect faculty program leaders with student participants. Commenting on her faculty leaders for her study abroad experiences, Alex stated,

> They have been absolutely amazing. And it makes you realize when you're with your professor for like almost 24/7, that they're just humans. They're not like these God-like figures that stand in front of 400 people and tell you what you need to know. So it makes it easier for me to go up to my professors now and like ask them questions before or after a class, because I know they're normal people. It's not like they'll yell at me for a stupid question or anything like that.

When asked how these experiences had helped her academically as a student she continued,

> They've definitely (helped), especially with Ireland, like before I even got to college, we actually had to read books and write things, and along with like you're in Dublin. Like you have lots of distractions – probably more so than you have on campus. And so trying to balance that, it definitely helps me prepare for what I'd have to do with more classes in college, and trying to balance a job, and clubs and stuff, along with my school work.

Alex has participated in more than one Study Abroad program.

> And with South Africa, it's just like – it's amazing because I saw so many animals that I'm learning about now. And I'm like yeah, I saw them do that. It's like – in animal behavior we're like yeah, you almost got charged by a rhino. I know the signs of aggression.

Christina and Ben were both eagerly anticipating their upcoming study abroad experiences. Christina exclaimed, "I just got accepted to study abroad in Mexico for veterinary medicine next summer. I'm so excited for that! I probably will get involved more with those people along the way preparing for that." Ben also had high expectations for his upcoming study abroad program. "It's really great, I'm actually going to Nicaragua with (my professor). And so anytime I want to talk to him.... He's kind of strolling by, and I say hey. So that's real cool."

The student-faculty interaction in these examples was predicated by the students' participation in the institutionally designed, faculty led study abroad program. As with the PA program mentioned earlier, it was my intent to study the impact of the RLC. The additional discovery of the study abroad participant – faculty coordinator relationship was also a welcome addition and merits further study outside this project.

While these two intentionally designed programs were shown to have significant impacts on students' ability to interact with faculty outside of the classroom, the intention of this study was to focus on one primary program, a residential learning community. The next section concentrates on the perceived impact on students of this structured environment.

Residential Learning Community

The administration of the institution created the structure and program for the RLC, which in turn created an environment of academic classrooms and laboratories in the residence hall, a system of faculty offices and academic support space, opportunities for smaller enrollment classes, and a smaller subset of university students in the RLC program. As designed, this RLC promotes greater opportunities for students to interact with their faculty in multiple academic and social settings. In smaller classes, students report the ability to get to know their faculty on a more personal basis, and provide greater opportunity for in-class interactions. Outside of the classroom through informal interactions (lunch in the cafeteria), during structured office hours, and through formal programmatic events (lecture series, faculty floor mates, etc), students share the ease of access and approachability to a receptive faculty. Joe, a member of the RLC, recognized the opportunities for this type of interaction with his faculty. "I see that they do have office hours and all that. It is usually the (RLC) classes that I'll come and be more close to my teachers... It is easier to meet with them."

When asked if he felt like his experience that he had with his faculty members is different due to membership in the RLC, Ben responded,

> Yeah, definitely. It's much closer and much easier to get a hold of them, much easier to just even talk to them period. Because, well, they're smaller classes, so they're not, you're not another person coming in, most of the time. So they don't have as much to deal with in terms of students coming in and just bugging them and bugging them and bugging them. So they're, they're more able to give you a good response then a lot of the university professors would be able to. And I think that really, really helps.

Jeff agreed and added, "I feel like a speck in the crowd" when referring to his classes outside of the RLC. Anna, also a member of the RLC, agreed with Ben;

> I love the fact that most of the professors, if not all of the professors, have offices within the building, and are very open about their office hours, and always have their doors open, and are just really great with being available for students.

Johnson and Romanoff (1999) in their assessment of data collected from the Russell Scholars RLC at the University of Southern Maine, found that these RLC students also felt more engaged in the classroom, achieved higher grades, earned more credits, and had a greater satisfaction with their college experience as a direct result of membership in the RLC. Edwards and McKelfresh (2002) studied the impact of the RLC on 81 students at the University of Delaware and found that the RLC had a statistically positive impact on male student success as measured by grade point average and persistence when compared to non-RLC students. Inkelas and colleagues (Inkelas et al., 2006) studied the impact of RLCs at three major universities on undergraduate students' intellectual growth and found the RLC to be the greatest predictors of their intellectual

growth. The findings from this current study on the impact of the RLC provide qualitative support to the quantitative survey findings.

Non-RLC Member Perspectives Regarding the RLC.

The 14 participants were asked if they perceived any difference in the nature of student-faculty interaction based on participation or membership in the RLC. The four participants who were not members of the RLC all believed that the program provided the RLC members with greater access to their faculty through smaller class sizes and the residential nature of the program (i.e., having faculty offices and classrooms in the residence hall where participants lived). They perceived this greater level of access as a key component of student-faculty interaction.

Alex, a non-RLC member, commented on the notion of RLC members as having more interactions with their professors. "I think so, because I've heard like the (RLC) classrooms are a lot smaller, and like you can get more actual time with the professor and stuff than actual like, the other science classes that are open for (them)." When asked about her perceptions of friends who are RLC members, she also felt that the members of the RLC interact more with their professors.

> (My friend in the RLC) makes it seem like it, because from what I talk to him about the (RLC) program, like his professors always made sure that he completely understands the material. And like if – because the classrooms are only, he says like forty people, something like that – it's like 10 people don't understand, then that's enough to actually go over it again. Unlike in a lecture up to 500 people, you need like 150 people not to understand and admit it in order for the same thing to happen, if at all.

Alex used this proportional example referring to smaller class size as a key variable to greater student-faculty interaction.

Michelle, also a non-RLC member, had a similar perspective on RLC membership as Alex in seeing the program as providing greater opportunities for student-faculty interaction. She was not as familiar with the RLCs as she was with the Honors College, yet she was able to draw some very strong parallels to the two programs.

> Professors seem to be more genuinely interested or just like – they actually seem to respect you more if you're in the honors college. And I don't think that's necessarily right, but they – and also, every single experience I've had is either because of an age (academic class standing) option, or a small class being an honors class. And so being in the Honors College really provides you the access to get to know your professor.

In commenting on her perspective on students' membership in a RLC as having an impact on student-faculty interaction, Brooke (non-RLC member) stated, "I would probably say that (RLC members) have more. They have better access in that they don't have to figure out like how to see (their faculty)." Again, access is highlighted as a key variable to student-faculty interaction. However, Brooke did not feel that this was entirely a consequence of RLC membership and access. She felt strongly of the ability of any student to develop an out-of-class interaction with their faculty.

> I think anybody can have interaction with a prof, if you're willing to pick it out. But I think that in (the RLCs), you know, different colleges and campuses you don't have to go looking as far for what you want. But I think that everybody could do that if they really wanted to go back and try.

These non-RLC participants identified the basic outline of the RLC program and shared their perceptions of its effectiveness on student-faculty interaction. Two of the four non-RLC participants were not aware of the program until matriculating in the university and the other two knew of the program and intentionally selected not to enroll for various reasons.

RLC Member Perspectives of their Membership in the Program

Of the 14 participants, 10 were active members of the RLC. A full nine out of the 10 RLC members interviewed were emphatic on their perceptions of membership in the RLC as having a significant impact on their ability to interact with their faculty outside of class. Fern, as the least emphatic supporter of the RLC's impact, believed that the RLC still might have had an impact, but suggested that other programs may have had more significant impact for her.

> Actually I don't think (membership in the RLC) made a very huge impact. I think – I can't picture myself not being in (the RLC) because then I wouldn't be TA'ing this lab, you know. But I feel like if I wasn't, I would still be TA'ing for something else. I don't know if it's made that big of an impact.

TA-ing is working as an undergraduate teaching assistant for a professor in a classroom, recitation section, or a teaching laboratory class. Fern continued her thoughts on the RLC membership.

> But I like it. I mean, I'm happy with it. It's just – I don't know if it's been that profound – and also I'm not living (in the RLC residence hall) this year. I did last year and now I'm way off campus, or on the other side of campus. So I don't think it's very – has a real strong influence on my life (at this time).

Fern went on to comment that maybe her Professorial Assistantship (undergraduate research assistant) or Teaching Assistant roles had greater impact than her membership in the RLC. As noted earlier in this chapter, students also reported that programs such as the Honors College Professorial Assistantship and the faculty-led Study Abroad Programs had significant impacts on student-faculty interaction independent of RLC membership.

The other nine students were very vigorous in responding to support their membership in the RLC as having a tremendous impact on their interactions with their faculty. The characteristics of small size, convenient location, programmatic influences, and nature of the faculty in the program were most widely commented on as being influential. Jeff reflected on the program size and nature of the faculty when he said, "I feel like a speck in the crowd outside of (the RLC). I mean, even my freshman chemistry professor (in the RLC) remembers me from class. I don't get that in the greater university (non-RLC)."

Location and access were two important factors for Randy. In reflecting on a friend who is not a member of the RLC, he commented on the challenges this friend faced in interacting with his faculty.

> And he'd always tell me how he had an appointment with an advisor, professor, something, and he'd always end up just sleeping, and not going. And I think part of it was just because everything was so far away from you. You'd have to go to like the west end of campus just to meet with somebody.

Joe felt that the accessibility of his faculty was significant in developing meaningful interactions with his professor(s). In commenting on why he interacted with his RLC faculty he responded,

> Well, because I just think that they're all accessible. You can email your teachers anytime. I don't know any teacher that could not email you when you get back to your studies, unless they're just overfilled in a big chem class or something like that in the university (non-RLC). But it's not just that. It's, I guess you're more, like in my situation. I'm probably more apt to go to a (RLC professor) just because I feel closer to them. And it's not that I'm embarrassed. I just figure, you know, otherwise it, it just seems like sort of a hassle, I don't know, to go out of my way to go to the office hours.

Commenting on his university (non-RLC) faculty he said that, "they're far away." While his RLC faculty were "right here at home, you know; it's like you go to class and then you can go to office hours just like right down the hall or something like that. So it seems, I like it a lot more. I think it's good."

Steve commented more on the overall impact of his RLC membership.

> I think it's not only the smaller classes with a smaller environment, so it's like your profs are in the building that you live in for a lot, well, if you live here. Which I did. So it's kind of, you know, it's like you're all in the same building. You're all seeing each other in the hall and stuff.

His perceptions of his non-RLC friends provided a sharp contrast. "Actually I've talked to a few of them. Most of them said they were not really able to interact with the professors, at least not the ones they've had."

Jennifer focused more on the opportunity for individual attention that the structure of the RLC provided for her.

> I think there's more of a one-on-one connection with the professors. I think it allows better – getting to know the campus. It's a big campus. And so I think if you can come in as a freshman you can kind of work your way out rather than having all your classes scattered throughout the campus and having to know the campus as a big chunk rather than kind of gradually getting to know it. I also feel that it makes you feel more welcome at college if you know that your professors are right downstairs and you can ask them. If you know that the help room is right downstairs, and you can ask them.

These *human-built environments* are significant in their ability to create an environment with opportunities for increased and meaningful student-faculty interaction outside of the formal classroom. The students' perceptions to these formal systems were overwhelmingly supportive of the positive impact these programs had on their ability to interact with a faculty member at a heightened-level for students in study abroad programs and participating in the professorial assistantship program. Students in the RLC experienced student-faculty interaction at both the rudimentary and heightened-levels.

Summary

The comments from these 14 students have provided this study with an array of outcomes and insights into student-faculty interaction outside the formal classroom. Based on the responses from students, I was able to identify two distinct levels of student-faculty interaction. Additionally, the students reported significant impacts on their academic, social, and personal development both directly and indirectly. Students also identified their perceptions of their faculty members' roles at the institution as well as their preferred characteristics of a good faculty member. Finally, the impact of the

designed RLC environment was highlighted with emphasis on the students' perceptions of the impact of being in the RLC on them from a multitude of perspectives.

CHAPTER FIVE – DISCUSSION AND IMPLICATIONS

In this chapter I focus on the interpretation of the data and results from chapter four with theoretical support from chapters two and three, and propose opportunities for practitioners and researchers to build programmatic efforts and new research endeavors based on these findings. The predominant questions guiding this study were:

1. What is the *nature* of out-of-class student-faculty interaction in a residential learning community?
2. What are the *outcomes* associated with out-of-class student-faculty interaction in a residential learning community?

The *nature* of out-of-class student-faculty interaction was found to be explained in the two distinct levels of interaction, rudimentary and heightened, as characterized by the frequency, quality, intensity or depth, and setting or location of the interactions. Students initiated nearly all of the rudimentary-level interactions for various reasons and the faculty created the opportunities for developing into heightened-level interactions.

The fundamental *outcomes* of out-of-class student-faculty interaction were that interactions outside of the formal classroom were meaningful experiences for these students. Students all generally wanted meaningful interactions with their faculty members, and the specific outcomes of increased student learning, motivation, self-worth, effort, and comfort level were all directly attributed to their interactions with their faculty outside of class.

As noted in chapter three, I interviewed 14 undergraduate students in their second year of study at the same large research university. While the size of the sample and the nature of the interview based study may not lead for significant generalizations across

communities, it does provide some significant data on the nature of and outcomes associated with student-faculty interaction. "The very nature of an investigative study within a human ecology designed experiment is likely derived from an interaction" (Bronfenbrenner, 1979, p. 39). To study student-faculty interaction from this perspective is quite appropriate and sample size does not necessarily rely on quantity of subjects, but rather the recognition of systematic identification of the differing ecological contexts of the study participants (Bronfenbrenner, 1979). The microsystem of student-faculty interaction is well-supported by human ecosystem theory (Bronfenbrenner, 1979; Bubolz & Sontag, 1993). Bubolz and Sontag's (1993) *human-built environment* is especially significant in this study and lends support to the impact of the residential learning community on student-faculty interaction and the related outcomes.

The next section of this chapter analyzes the two guiding research questions on the *nature of* and *outcomes associated* with student-faculty interaction within the lens of the human and family ecosystems framework. The following section focuses on the residential learning community and the environmental/programmatic impact on students in this study. The final section identifies future research opportunities based on the findings from this study and implications for practice in higher education.

The Nature of Student-Faculty Interaction

As reported in great detail in chapter four, students interacted with their faculty outside of the classroom in two distinctive levels of interaction. The primary interaction was defined as rudimentary which often occurred at random intervals with little frequency and largely unstructured in format. This rudimentary-level interaction experience is often reflected by students asking a quick question about an in-class topic

that happened just outside the classroom or in a faculty member's office or other public area. All of these rudimentary-level interactions developed from a formal interaction with the faculty member in the classroom. The next level of interaction is defined as heightened and was identified by interactions composed of greater depth of topic, increased regularity of the interactions, often on a more regular basis, and in locations beyond the immediate outside of classroom settings like laboratories, professional conferences, or coffee houses.

Frequency of the interactions, quality of each interaction, intensity and depth of the interaction(s), and the location or setting of the interaction(s) were variables that identified the value of the interaction for the student and thus helped characterize the distinct levels of interaction. The intent of this study was to better understand the nature of these interactions. These two distinct levels, rudimentary and heightened, helped characterize the interaction experiences and may provide academic administrators with a better understanding of the experience beyond the previous survey research studies on academic achievement, degree completion, and satisfaction associated with in-class student-faculty interaction (Lamport, 1993) and into a more personal evaluation of the student experience and the influences on the students' viewpoint of their own growth and development from multiple perspectives.

Students interacted with their faculty outside of class for multiple and various reasons. Some just wanted to get the most out of their investment in higher education and did not want to be just an empty vessel in a classroom awaiting the dissemination of knowledge. Some were purely focused on enhancing their academic experience by asking for additional assistance or clarification of a classroom issue. One student thought her

faculty member was a "fascinating" person and wanted to get to know that individual better. The most prevalent reason for interacting initially was for clarification of a classroom topic. This initial topic, extended from the classroom, seemed to be a comfortable and appropriate means to initiate an interaction with their faculty member for many of these students.

The types of interaction were also somewhat varied ranging from very intense experiences of participating in a study abroad program and conducting bench laboratory research with a faculty member, to moderate interactions traveling in a van to a professional conference and playing ultimate frisbee at the campus recreation fields. The most prominently reported type of interaction was of students asking a question about a classroom topic, challenging a test question, or seeking clarification on a particular classroom item. All interactions were interpersonal in nature and with the one exception of an instant messenger computer text message, all were face-to-face.

The interaction experiences shared by the students in this study were reflective mostly of individual interpersonal experiences. Group experiences were reported much less for most students. Alex commented about her small group experience with her faculty member and often used the term "we," but was able to make the value of the experience very personal and individual. Fern was a member of a research laboratory team, but the reflections she shared were of her individual interpersonal interactions with her faculty mentor.

Regardless of why and in what form they pursued an outside of the classroom interaction with their faculty member, nearly all of the rudimentary level interactions were initiated by the students. In some instances the faculty often made reference to the

interaction opportunity and created the environment for the interaction, but it was ultimately the student who initiated the actual interaction. Conversely, faculty members seemed to be the dominant force in elevating the level of interaction from rudimentary to heightened. The exception occurred where three students went directly to the heightened level through a formal program such as a study abroad program and a formal research assistantship program.

The progression through these two levels of interaction is directly related to the impact and outcomes associated with the interaction and will be addressed in detail later in this chapter. At this point it is important to note that these interactions have meaning for the students from personal, social, and/or academic perspectives and therefore helped identify the *nature* of the experience. For most instances, there was intent on the students' behalf for the interaction. They wanted something whether it was clarification on an assignment or a deeper and more meaningful interaction; the students were intentional about the interaction. It is also important to note that there is a filtering system inherently in place. Students selected the course and instructor in the registration process, most of these students selected to attend class, and results from this study indicate that a subset of these students chose to interact with their professor outside of class at what I defined as a rudimentary-level of interaction. Why these students selected to take the interaction from in class to the next level outside of class, and why the faculty members selected a subset of the students with rudimentary-level interactions to develop into students with heightened-level interaction opportunities is still unknown, but may be accounted for by understanding the developmentally instigative characteristics that individuals bring with them to the environment (Bronfenbrenner, 1993; Renn, 2003). The two questions create

an opportunity for greater research into this area which will be discussed in the final section of this chapter.

Outcomes Associated with Student-Faculty Interaction

As stated at the beginning of the chapter, outside of the classroom student-faculty interaction mattered for these students. These students all wanted meaningful interactions with their faculty members. Students directly attributed the outcomes of increased student learning, motivation, self-worth, effort, and comfort level to their interactions with their faculty outside of class.

These 14 students, through their responses to the interview questions, revealed the specific and significant outcomes that they directly and indirectly attributed to their interactions with their faculty members outside of class. From an academic impact perspective at both the rudimentary and heightened levels of interaction, students reported feeling more comfortable interacting with their faculty member both inside and outside of the classroom. Students reported feeling more comfortable asking questions inside of the classroom, stopping by office hours for a quick question, and even stopping by and greeting the faculty member in a social situation such as at lunch in the cafeteria.

Additionally, students reported that they had increased their level of understanding about the particular class subject or sub-topic initially introduced during class. Often for the students it was just a matter of clarifying a classroom concept or working through a problem set in the faculty member's office, but in a few situations students reported that the level of understanding inside the classroom was minimal or non-existent until they had the opportunity to follow-up on the topic, or introduce understanding of a secondary concept which required initial knowledge as with the prior

knowledge method of learning of science (Smith, 1991). Pike (1999) used the College Student Experiences Questionnaire (Pace, 1990) to study the impact of RLCs on educational gains. While not the primary focus of the study, student-faculty interaction was identified as a significant factor within the RLC and *interaction with faculty* was one of the 10 categories on the questionnaire scale. Pike found that RLC students had greater interaction with faculty than the non-RLC study group (Pike, 1999). While more directly attributed to the RLC membership than out-of-class student faculty interaction, the RLC members had significant gains in general education and in intellectual development. The findings from this study of out-of-class student-faculty interaction in a RLC lend support to Pike's initial findings from his large sample (n=2406) questionnaire study.

Furthermore, these 14 students reported that they felt more valued as learners and individuals because of their ability to interact with faculty. Self-worth, self-efficacy, and meaning as a learner are all outcomes that these students associate with out-of-class student faculty interactions. House (1992) helped define academic self-concept in terms of how the student perceived his or her academic potential and ability. Woodside, Wong, and Weist's (1999) study of 176 undergraduate students used a questionnaire to study the interrelatedness of student-faculty interaction on academic achievement and students' self-concept. The researchers found that student-faculty interaction had a statistically significant positive impact on students' perceptions of self-worth. This dissertation, which focuses on out-of-class student-faculty interaction, lends support to the Woodside, Wong, and Weist findings (1999).

In heightened level experiences, students were often provided with greater responsibility and their work had greater value to the individual student and the

relationship. Subsequently students also reported that they increased their own level of effort in the classroom as a result of the interactions with individual faculty. They did not want to let the faculty member down and wanted to show that the interactions had made them better students. They wanted to show that they valued the student-faculty interaction experience and often did so by increasing their levels of effort and participation. This phenomenon also highlights where students make meaning from the interaction experience. There were some strong connections with these findings linking back to the literature on student engagement (Kuh, 2003; National Survey of Student Engagement, 2005; Umbach & Wawrzynski, 2005) and college impact (Pascarella, 2001; Pascarella & Terenzini, 2005). Umbach and Wawrzynski (2005) in their review and analysis of two national data sets found that course-related student-faculty interactions were related to student engagement, and out-of-class student-faculty interaction also had an impact on student engagement. Again, this qualitative study on out-of-class student-faculty interaction provides an essential insight into individual students' personal assessment of the impact of these interactions and an even greater insight into their collective voice (Atkinson, 2005; van Manen, 1990).

Finally, students reported being more invested in their overall academic experience. The interactions with their faculty somehow helped them validate their learning experience as a student in the class, laboratory, and undergraduate program in general. Perceptions of self-efficacy have been supported in the literature on reading development as a factor in learning (Linnenbrink & Pintrich, 2003), academic achievement (Zimmerman, 2000), and goal attainment (Schunk, 2003) in settings both in and outside the formal classroom. The current study provides some additional support for

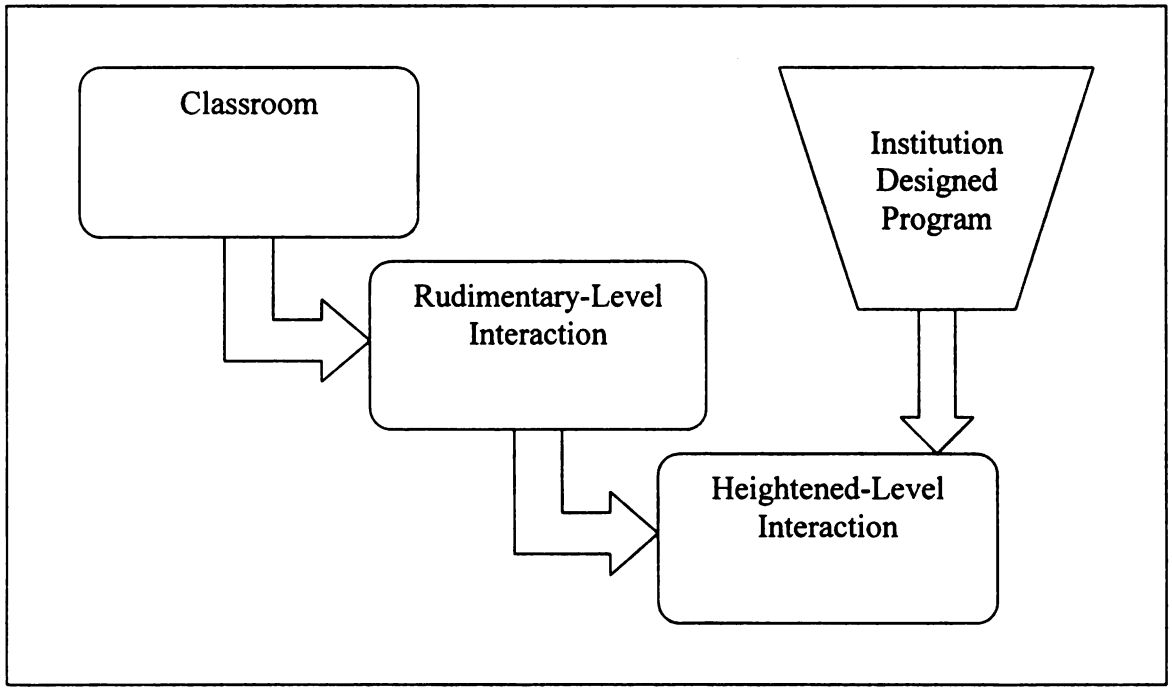
the value of self-efficacy and investment in their overall learning and goal attainment. This academic motivation outcome also merits particular attention for the ever expanding roles and responsibilities of faculty members in higher education outside of the classroom.

Based on the reported outcomes of these 14 students, most reported that they were likely to continue to interact with the faculty member they had identified in this study. Six of the eight students that were only in the rudimentary-level planned on continuing and four of the six heightened-level students planned on continuing the relationship. Many were looking forward to a new term with new faculty and the tools to make the decision to take a classroom experience and elevate it to a rudimentary-level out-of-class interaction with the next faculty member. Some were searching for another class offered by the same instructor, and some were just ready to get back to the normal grind of college without the out-of-class student-faculty interaction. Of the six heightened-level students, three entered the relationship through the pathway of classroom interaction, then rudimentary-level interaction, which developed into a heightened-level interaction. All three of these students intended on continuing the relationship. While the sample size and methodology limit an inference from the data, I propose that the heightened-level interactions that develop through the classroom and rudimentary-level interactions may appear to be stronger initial relationships than those created by institutional programmatic structure possibly because the relationship has developed over time through a series of interactions. Again this concept is worthy of further investigation in a more longitudinal study.

For the student, perception is reality and therefore is valid and meaningful (Bronfenbrenner, 1979). I explicated the experiences of these 14 undergraduate students' interactions with their faculty as they shared very personal and real experiences. Some students discussed basic out-of-class interactions with their faculty member as relating to class material during faculty office hours, and others disclosed deeper and more in depth and personal interactions with their faculty. While I have characterized the former as a rudimentary-level interaction and the latter a heightened-level interaction, to the individual student, each and every interaction had value and thus was a meaningful experience.

Student-Faculty Interaction Process

Figure 1 – Student-Faculty Interaction Process



The identification of the two distinct levels of out-of-class interactions with their faculty members provided a means to highlight each individual's journey or progression

through what is simply the student-faculty interaction process (Figure 1). Students entered a student-faculty interaction relationship typically through a classroom environment with the faculty member or through a structured program developed by the institution. The students in the classroom environment often initiated an out-of-class student-faculty interaction experience usually just outside the classroom or within the faculty member's office. Those students often had a very positive experience and often selected to continue this type of interaction. A subset group of those students was selected by the faculty member to initiate in a higher level of interaction and reported similar positive experiences and selected to continue the relationship. The reward factors for the students kept them coming back for either the same level experience as a standard reinforcement, or at a heightened level to get and even greater positive experience or outcome.

Anna, one of the students in this study, started out interacting with her faculty member at a rudimentary level in her first year by going to her chemistry professor's office hours to talk about basic classroom topics. The professor also hosted open office hours in the cafeteria and Anna along with a number of students attended these extended office hours and started to expand the level of academic discussion to other courses the students were taking and looking to the future of how this chemistry course will help prepare them in the next sequence of courses. After this series of rudimentary-level interactions, the faculty member identified a subset of these students and encouraged them to apply for undergraduate teaching assistant positions for the following year within his chemistry course and other courses in the department. Anna followed the process by initiating a rudimentary-level interaction with her faculty member. She found it

rewarding, so she entered another rudimentary-level interaction. At his determination and discretion, the faculty member then invited Anna into a higher-level interaction opportunity thus fulfilling the process.

Bronfenbrenner (1993) identified a variety of attributes that students bring with them to the college environment as *developmentally instigative characteristics.* He posed that these characteristics do not necessarily determine student behavior, but in the perspective of a human ecologist they have an influence on student behavior and development (Renn, 2003). Each student, given the same stimuli, may react and respond in different ways in part due to these *developmentally instigative characteristics.* This may help explain why some students in this study continued to interact at the rudimentary-level and some did not (Renn, 2003). It does not necessarily explain why the faculty member selects some students for heightened-level interactions. A logical next level question could be whether the faculty member has developmentally instigative characteristics that he or she brings to the environment.

Residential Learning Community

As identified in the two guiding questions of this study and supported in the literature review in chapter two, the residential learning community is a fundamental environmental influence on the study of student-faculty interaction. The RLC does not fit cleanly into the definition of the exosystem within the human ecology framework as defined by Bronfenbrenner (1979), which is a fundamental reason why I incorporated Bubolz and Sontag's (1993) family ecology adaptation of the human ecology theory into this study. Bubolz and Sontag (1993) viewed the *human-built environment* as the next outer nested circle from the family system which is parallel to the microsystem in the

human ecology theory. In this study, the student-faculty interaction is the microsystem/family system and the RLC is the human-built environment which has direct and indirect influence on the environment and therefore the development of the individual student. The family ecology theory provides for the incorporation of these *human-built environments* which are integral to this study and interpretation/application of the human ecology theory (Bronfenbrenner, 1979, 1986; Bubolz & Sontag, 1993). The human-built environment encapsulates the RLC, Study Abroad, and Professorial Assistantship programs which were intentionally designed for impact on the students.

All 14 students in this study identified the RLC as having an impact on students' interactions with their faculty. The 10 RLC members interviewed identified the characteristics of the RLC as having the greatest impact on their access to outside of class interactions with their faculty, which supports the previous findings of Arora (2005), Brower, Golde, and Allen (2003), and Stimpson (1994). The convenience of a faculty office in their residence hall, fewer students in the RLC classes, and designed programs and activities for student-faculty interactions were the predominant influential items as identified by these students. The four non-RLC members shared their perspectives of the RLC based on comments from friends and classmates. They believed the RLC was advantageous to RLC members in gaining access to the faculty through office location and smaller class sizes. They perceived this greater level of access as a key component of student-faculty interaction, also previously found by Einanrson and Clarkberg (2004), Golde and Pribbenow (2000), and The Carnegie Foundation for the Advancement of Teaching (1990).

The additional perception of many RLC and non-RLC participants of faculty being teachers further supported the notion that class-size and program design have impact on creating the opportunity for greater outside of class interaction with faculty. Only 5 out of the 14 participants identified research or academic service as a component of their faculty member's roles or responsibilities. In discussing their faculty, nearly every student identified the faculty member as their "teacher." This teacher perception of the faculty may be a result of the students' previous 13 years of formal K-12 education where their educators were teachers, but it may also be an indication that we in the higher education profession do not do a very good job of educating our undergraduates about our roles as educators, researchers, developers of new knowledge, and community servants. Nonetheless, the perception is very real for these students and thus contributes to their understanding of faculty, which in turn impacts the student-faculty interaction. Harris (2003) studied faculty identity formation issues, Walkington (2005) studied prospective and current teachers' identities, and Wright (2005) investigated teaching identity of faculty at research universities, but I was not able to locate published research on students' perceptions of faculty identities and roles.

In chapter two I introduced the reform movement in student learning and highlighted reports calling for improvements in undergraduate education. The Carnegie Foundation for the Advancement of Teaching (1990) produced a report detailing the challenge of creating community in the large research university. The RLC movement in higher education has provided an environment for increasing the development of community to include both faculty and students. As revealed throughout this study, the students shared multiple examples of how their interactions with faculty members outside

of class have been instrumental in their communities. The non-RLC students did not move beyond the rudimentary-level interaction with faculty members. The two non-RLC students who developed heightened-level interactions did so through structured programs and thus bypassed the classroom route into a rudimentary-level experience.

Students also had expectations of the faculty and staff in the RLC. They entered into the program with the expectation that they would have smaller classes, faculty members' offices in their residence hall, academic support staff for advising and general assistance, and other students with similar interests in a learning community. Subsequently there is an expectation for opportunities for student-faculty interaction, excellence in teaching, and access to academic professionals to help them meet their academic goals. They expected the environment to be supportive and conducive to enhanced learning that was not available in the greater institution as a whole. Furthermore, the institution, as represented by the leadership, had expectations in developing the RLC program in attracting students that might otherwise select a small liberal arts college by providing many of the attractive qualities of these colleges (teaching faculty, smaller class sizes, greater access to faculty attributed to smaller enrollment, and smaller communities) (Umbach & Wawrzynski, 2005) within the university.

Implications for Research and Practice

Student Versus Faculty Initiation

One area of particular interest is the notion that students typically initiated the rudimentary-level interactions and faculty then initiated the heightened-level interactions. From the interviews in this study, I was not able to discern why this phenomenon exists,

but certain plausible explanations have come to mind. It could be a simple issue related to numbers and size. In these examples students were in classes ranging in enrollment from 18 students to over 500 students. Additionally, they were enrolled in a minimum of 12 semester hours, which represented a range from three to six courses. It may be easier for a student to identify his or her four faculty members than it is for a faculty member to identify one of 300 students in a particular semester. Furthermore, once the student has identified him or herself to the faculty member through rudimentary-level student faculty interaction, it may become much easier for the faculty member to identify that student as an interested party and thus open the opportunity for further or heightened-level interactions. This observation of students initiating the rudimentary-level interactions and faculty initiating the heightened-level interactions emerged directly through the interpretation of the data. The notion stated above has no direct support from this study. Nonetheless, this is an interesting notion and warrants further investigation.

Faculty

While this study focused on the impact of student-faculty interaction on the student, the parallel impact on faculty is studied to a much lesser extent (Einarson & Clarkberg, 2004; Frankel & Swanson, 2002; Golde & Pribbenow, 2000). Golde and Pribbenow (2000) conducted a study of faculty roles in residential learning communities which was instrumental in the development of my study. They used qualitative methods to interview faculty members involved in RLCs about their involvement with the program and their roles within the institution (Golde & Pribbenow, 2000). In my study, I found that very few students know the roles and responsibilities of their professors. Of

the few students who knew a little bit about the roles of their faculty, none truly understood the professoriate.

Beyond the organizational role of the RLC within the institution, I propose that investigating the actual nature, content, and quality of the student-faculty informal interaction is the next step in investigating this phenomenon in undergraduate higher education. Then, researchers may be able to understand the shared impact on students, faculty, and the subsequent student academic achievement, persistence, student development, career influence, and satisfaction with the overall undergraduate experience. In designing a similar study on the impact on faculty, a researcher might follow the same protocol for the student interviews in this study and then, based on the responses from the students, conduct a responsive interview (Rubin & Rubin, 2005) with the faculty participants identified as subjects by the students. Questions pertaining to the impact of faculty career stage, faculty rewards, and faculty roles within the tenure system could all be variables that impact participation in out-of-class student faculty interaction (Baldwin, Lunceford, & Vanderlinden, 2005).

Setting, Context, Environment

Another interesting observation from interpretation of the data was that the location or setting of these interactions were noted to be distinct for the two levels – rudimentary and heightened. Golde and Pribbenow (2000) discussed the cultural barriers inherent in the faculty community that may limit student access in certain locations. I can note that by the faculty member initiating the heightened-levels of interaction, he or she also opened up a wider range of physical locales to the student. As their primary work environment, the institution is home for the faculty member as is often the surrounding

community. On average, most students are only on campus for nine months at a time, live in the residence hall environment approximately half of their undergraduate program, and are often in the community for approximately four to five years. My interpretations of these observations are not supported by this study, but may also warrant further inquiry. Any study of human ecology identifies the context or setting as having influence on the individual and vice-versa (Bronfenbrenner, 1979; Bubolz & Sontag, 1993). The question still remains as to why the setting has an impact on the nature of student-faculty interaction.

Designing RLCs

An additional direction for future research is on the programmatic and facility components of the RLC and how these intentionally designed environments and programs promote success and satisfaction for the student participants. In this RLC, the entire faculty had their primary offices located within the residence complex. How might ease of access from a geographical or physical location impact students? When students have to travel past a faculty member's office to reach the cafeteria, laboratory, or classroom on a regular basis, how might that experience impact measures of success and satisfaction? From this study, students identified small classrooms as having an impact on their decision to interact with their faculty members outside the classroom. Is this true for many RLCs? What about non-RLC programs? Is it only the faculty to student ratio that matters to students? From a programmatic perspective, how might incorporating undergraduate students into faculty research endeavors impact success, retention, learning, and overall satisfaction? If academic advising is perceived as teaching, how might this be viewed as student-faculty interaction? The concept of advising as teaching

leads to multiple studies on the blended roles of professional advisors as teachers and the advising role of primary faculty.

Student Success and Satisfaction

Other components of student success and satisfaction are also ideal areas to study within the RLC (Kuh & Documenting Effective Educational Practice (Project), 2005; Pascarella & Terenzini, 1991, 2005). Topics such as student engagement in the curriculum, developing opportunities for outside of classroom learning, developing a community of scholars, and defining alternative faculty roles within the RLC and institution are four key topics ripe for study within the RLC ecosystem. I intentionally refrained from studying the outcomes from analyses of the National Survey of Student Engagement (2005) to focus on the students experiences in this residential learning community from a purely qualitative experience. A plausible next step in the study of student success and satisfaction of RLC students is to incorporate the quantitative findings from the large longitudinal national study on student engagement with the qualitative findings from this type of qualitative interview research. RLCs are prime environments for a greater blend of the formal classroom curriculum with the out-of-class learning in the co-curricular realm of the institution (Kuh, 1995). Similarly, the intentional design of the physical facilities of the RLC places students of similar academic interests with faculty of the same genre in a residential community. How might the RLC develop extended learning opportunities from social, cultural, experiential, and activity-based programs to enhance the classroom topics and concepts? It may be insufficient to just place faculty and students together without some sort of programmatic structure to encourage the interactions. And finally, how might an institution redefine the

roles and responsibilities of some of the RLC faculty members that might promote activities and interactions that lead to success and satisfaction?

Practitioners could take the results and implications from this study to help in the formal development and design of residential learning communities within large research universities. Specifically, professionals in higher education could place a higher emphasis on the formal design of the physical facilities of the RLC; enhance funding measures for these programs that increase opportunities for and access to student-faculty interactions outside of the classroom; focus on the special information gained by qualitative research on student success and satisfaction; consider alternative faculty roles and responsibilities and adjust the rewards system to foster increased student-faculty interaction; and focus a greater attention on the environmental and ecosystem influences on the development of the undergraduate student.

When considering the implementation of a RLC, higher education professionals should design the physical facilities to be more than themed housing with an occasional faculty member interacting with the community to take advantage of the human-built components that impact the students. The program should be built around an academic college or department with faculty and students sharing the commitment to the community to maximize faculty investment and commitment (Boyer Commission on Educating Undergraduates in the Research University, 1998; Tinto, 1997). Faculty interaction outside of the formal classroom was a significant part of these students' meaningful experiences in college. The culture of the institution should be another key component of determining the design of the program, enrollment management, and facility development (Henderson, 2005). Collaborating with architects, faculty, student

affairs staff, housing professionals, physical plant leaders, dining service leaders, and especially students should be essential partnerships in this type of endeavor.

At a typical research intensive university, offering large lecture courses with a single faculty member is a means to save initial costs for general operation of an individual course (Boyer Commission on Educating Undergraduates in the Research University, 1998). Funding for RLCs, especially with a design for smaller classrooms, lower student to faculty ratios, and greater access outside of the classroom, likely is more expensive in the short term by traditional cost per pupil calculations. Institutions should look at the long-term value of developing a RLC in other measured areas of student success such as persistence, degree completion, time to degree completion, creating a more satisfied student body which in turn may impact alumni, development, and new student and faculty recruitment (Tinto, 1987). RLCs and other programs that promote student-faculty interaction could have a much greater impact for the resources invested into the program.

Quantitatively measured academic gains are important measures of student success in college, but that is one small component of the overall student experience. Qualitative studies that get to the actual meaning for the students of the experience are of great value in making sense of the data from surveys, grades, retention, and degree completion (Creswell, 1998). The quantitative data informs as to the 'what is happening' portion of a research question, but the qualitative data may address the more specific and informative questions of 'how so,' 'in what manner,' and 'why' (Firestone, 1987).

Reformists have stated the need for change in the manner in which college faculty are rewarded through the tenure and performance systems at many research intensive

universities (Diamond, 1999; Seymour, 2002; Tierney, 2001). They additionally cite the need for a greater variety of faculty roles and the flexibility needed to change these roles as the needs of both the institution and the faculty evolve and change (O'Meara, 2005; Palmer & Collins, 2006; Young, 2006). Another means to focus on learning outcomes is by expanding the functions and contributions of academic educators and crossing the traditional boundaries of faculty and staff. Blending the formal faculty roles with those of the traditional student affairs staffs could provide opportunities for academic and student affairs professionals with masters degrees to teach introductory seminars in the RLC, and for faculty to work individually with students on research projects, academic advising, and career planning. Clinical faculty members are commonly used in many professional educational fields such as medicine, nursing, veterinary medicine, allied health programs such as speech-language pathology, audiology, physical therapy, occupational therapy, and formal education training fields such as kinesiology and teacher education. The focus of these clinical faculty is more on student learning and other outcomes rather than individual roles, rites, and responsibilities (American College Personnel Association, 1996). Student learning should be everyone's responsibility in the institution.

Finally, and less obvious to those who have not studied human ecosystem theory (Bronfenbrenner, 1979; Bubolz & Sontag, 1993; Renn, 2003), greater attention should be spent on studying and identifying the environmental and ecosystem influences of the human-built environments (macrosystems) and setting on the individual student and their microsystems of interactions. The human ecosystem theory of human growth and development is a powerful lens that incorporates multiple perspectives of the institution and participants to better understand how the individual develops within the system

(Renn & Arnold, 2003). Isolating the student from the environment only provides a small snapshot of the total experience. The environment impacts the individual and the individual impacts the environment, there is no valid means to separate the two without losing some aspect of both (Bronfenbrenner, 1979, 1986; Bubolz & Sontag, 1993). The residential learning community is a valuable and powerful human-built environment (Bubolz & Sontag, 1993) that has influence on the microsystems (Bronfenbrenner, 1979) of the institution. In this study, the microsystems were students interacting with their faculty.

As revealed through the rich experiences of these 14 students, I found that students initiated rudimentary-level interactions with their faculty, and some faculty initiated heightened-level interactions with some of the students from the rudimentary-level interaction group. The distinguishing characteristics that defined the differences between the two levels of interaction were the frequency, quality, intensity or depth, and setting or location of the interactions. Students reported increased student learning, motivation, self-worth, effort, and comfort level all directly attributed to these student-faculty interactions. Furthermore, the RLC and other institutionally developed programs and environments were found to have had a perceived impact on the program structure that allowed for greater access to and facilitation of out-of-class student-faculty interaction.

In my role as a practitioner, I have gained numerous insights on student-faculty interaction, program design, students' lack of understanding of the faculty roles, and the importance of lending interview subjects voice beyond their individual verbal responses all directly from this study. I will likely continue to identify opportunities for students to

interact with faculty outside of the formal classroom as well as enhance and promote the continued development of residential learning communities. As a researcher, I am very intrigued about students' perceptions of faculty roles, residential learning communities, and other components of RLC that lead to measures of student success. Qualitative methodology and perceptions of goodness (validity) have garnered my attention as a self-described practitioner-based researcher in higher education administration and student affairs. I want to investigate the perceptions of researchers in other genres, particularly sociology and anthropology, to better understanding methodology as it relates to the educational and research epistemology of the genre.

It is my hope that my findings from this study will help other practitioners in the development of programs (especially residential learning communities) that allow for increased access to out-of-class student-faculty interaction. Additionally, I hope that other researchers can use these findings to build new studies on other factors of student success and satisfaction. Finally, I hope that this study will lend support for others to use the human ecology (Bronfenbrenner, 1979) and more specifically the family ecology (Bubolz & Sontag, 1993) adaptation as meaningful frameworks to guide their studies of individuals and groups within environments and ecosystems.

APPENDICES

CONSENT FORM

My name is Philip Strong and I am a doctoral student in the Department of Educational Administration at Michigan State University. I am conducting research for my dissertation on issues of student-faculty interaction in a residential learning community.

You must be at least 18 years of age to participate in this study. Your participation in this study is completely voluntary. You may choose not to participate at all, or you may refuse to answer certain questions, or you may discontinue you're your participation in this study at any time without penalty. The interviews that I will conduct as part of this study are completely confidential and your identity will remain confidential in any reports of the research findings. Your privacy will be protected to the maximum extent allowable by law. There will be an initial interview that will last about 90 minutes, and if necessary, I may request a follow-up interview for clarification purposes. I will use an audio recorder and then will transcribe the interview into a manuscript. The audio files and subsequent transcripts will be stored in a locked cabinet in a locked room, and then destroyed upon completion of the project.

No significant risks to you as a participant are anticipated. It is possible that the interview questions may elicit some emotional feeling(s) that were previously unknown to the researchers. In this event, you will be informed of and referred to MSU Counseling Center. You will always be allowed to stop at any time during the study. This study will add to the broad bodies of knowledge on the impact of structured residential learning communities on college students as well as enhance the understanding of the nature and impact of student-faculty interaction on college students in this particular residential learning community. Individual participants will benefit from the societal impact of this study.

If you have any questions about this study, please contact:

Philip E. Strong, M.S.	Kris Renn, Ph.D.
29 East Holmes Hall	428 Erickson Hall
Michigan State University	Michigan State University
East Lansing, MI 48825-1107	East Lansing, MI 48824-1034
517-353-6482 phone	517-353-5979 phone
517-432-2758 fax	517-353-6393 fax
strongp@msu.edu	renn@msu.edu

If you have any questions or concerns regarding your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact anonymously, if you wish:

Dr. Peter Vasilenko
Chair, University Committee on Research Involving Human Subjects (UCRIHS)
202 Olds Hall
Michigan State University
East Lansing, MI 48824
517-355-2180 phone
517-432-4503 fax
ucrihs@msu.edu

Thank you for your participation in this study! As a small token of my appreciation for your participation, I will be providing you with a $10 gift certificate to the bookstore at the end of the interview. Your signature below indicates that you are at least 18 years of age and voluntary agree to participate in this study.

_____ _____

Participant's Signature / Date Researcher's Signature / Date

STUDENT INTERVIEW PROTOCOL

Part 1 - Opening

Thank you for agreeing to participate in this interview. I anticipate that we will talk for approximately 70 minutes. During our time, I will ask you a series of questions regarding your interactions with faculty outside of the classroom. Before we begin, I'd like you to review the *Informed Consent Form* and I'll answer any questions that you may have.

Part 2 – Demographic and Background Information

- Please select a pseudonym that has no direct relation to your formal name, nickname, or family name. We will use this moniker throughout the study to protect your confidentiality.
- How many years have you attended this institution?
- What is your major?
- What are your academic and professional goals?

Only for members of the RLC

- How do you see your participation in this RLC as helping you achieve these goals?
- Why did you select this Residential Learning Community (RLC)?

Part 3 – The Interview

As you know, this study is designed to examine student-faculty interaction within this RLC. The next few questions will start to get at the nature and outcomes of your interactions with your LBS professors.

- MAIN: In what ways have you interacted with your professors outside of the classroom?
  - PROBE: Tell me more about a particular experience with a professor.
  - FOLLOW-UP: Who initiated the interaction you shared with me?

- MAIN: How has the experience impacted you?
  - FOLLOW-UP: Academically, socially, personally

- MAIN: Do you plan on continuing to interact with these professors?
  - FOLLOW-UP: If so, In what manner?
  - FOLLOW-UP: If not, why?

- MAIN: Do you and your professor(s) interact differently during class than you do outside class?
  - FOLLOW-UP: If so, in what way(s)?

- MAIN: What do you see as the role or responsibilities of your professors?
  - PROBE: Verbalize a job description of your professors for me.

- MAIN: Do you feel that your experience is different because you are in or not in the RLC?
  - FOLLOW-UP: Why or why not?

- FOLLOW-UP:What is your perception of your friends' experiences with student-faculty interaction who are in or not in this RLC?
- PROBE: Is it different or the same?
- FOLLOW-UP: How so?

Part 4 – Closing

Thank you for taking part in this study. I greatly appreciate your responses to my questions and insights into student-faculty interaction within LBS. You have given me a much to ponder, interpret, and analyze. If needed, I may wish to follow-up with you at a later time to further discuss your experiences. Would you be willing to talk with me again about this topic? Let's review the *Informed Consent Form* to ensure that you are aware of your rights as a volunteer participant for this study.

REFERENCES

Altbach, P. G., Berdahl, R. O., & Gumport, P. J. (1999). *American higher education in the twenty-first century: Social, political, and economic challenges.* Baltimore: Johns Hopkins University Press.

American College Personnel Association. (1994). *The student learning imperative: Implications for student affairs.*Washington, D.C.

American College Personnel Association. (1996). The student learning imperative: Implications for student affairs. Retrieved December 17, 2006, from http://www.acpa.nche.edu/sli/sli.htm

Anaya, G., & Cole, D. G. (2001). Latina/o student achievement: Exploring the influence of student-faculty interactions on college grades. *Journal of College Student Development, 42*(1), 3-14.

Arminio, J. L., & Hultgren, F. H. (2002). Breaking out from the shadow: The question of criteria in qualitative research. *Journal of College Student Development, 43*(4), 446-459.

Arora, D. (2005). Connecting through residential learning communities. *Connections, 5*(7), 8-9.

Association of American Colleges. (1985). *Integrity in the college curriculum: A report to the academic community.* Washington, D.C.: Association of American Colleges.

Astin, A. W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel, 25*(4), 297-308.

Astin, A. W. (1993). *What matters in college? Four critical years revisited.* San Francisco: Jossey-Bass.

Astin, A. W., & Astin, H. (1993). *Undergraduate science education: The impact of different college environments on the educational pipeline in the sciences.* Los Angeles: University of California, Graduate School of Education, Higher Education Research Institute.

Atkinson, P. (2005). Qualitative research -- unity and diversity. *Forum: Qualitative Social Research* 6(3), Art. 26. Retrieved January 23, 2007, from http://www.qualitative-research.net/fqs-texte/3-05/05-3-26-e.htm

Baldwin, R., Lunceford, C., & Vanderlinden, K. E. (2005). Faculty in the middle years: Illuminating an overlooked phase of academic life. *Review of Higher Education, 29*(1), 97-118.

Bennett, W. J. (1984). *To reclaim a legacy: A report on the humanities in higher education*. Washington, D.C.: National Endowment for the Humanities.

Berger, J. B. (1997). Students' sense of community in residence halls, social integration, and first-year persistence. *Journal of College Student Development, 38*(5), 441-452.

Blimling, G. S. (1993). The influence of college residence halls on students. In J. Smart (Ed.), *Higher education: Handbook of theory and research* (pp. 248-307). New York: Agathon.

Boyer Commission on Educating Undergraduates in the Research University. (1998). *Reinventing undergraduate education: A blueprint for America's research universities*.Washington, D.C.: Carnegie Foundation for the Advancement of Teaching, http://naples.cc.sunysb.edu/Pres/boyer.nsf.

Boyer, E. L. (1987). *College: The undergraduate experience in America*. New York: Harper & Row.

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.

Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology, 22*(6), 723-742.

Bronfenbrenner, U. (1993). The ecology of cognitive development: Research models and fugitive findings. In R. H. Wozniak & K. W. Fischer (Eds.), *Development in context: Acting and thinking in specific environments*.Hillsdale, NJ: Erlbaum.

Brower, A. M., & Dettinger, K. (1998). What is a learning community? Towards a comprehensive model. *About Campus, 3*(5), 15-21.

Brower, A. M., Golde, C. M., & Allen, C. (2003). Residential learning communities positively affect college binge drinking. *NASPA Journal, 40*(3).

Brubacher, J. S., & Rudy, W. (1976). *Higher education in transition: A history of American colleges and universities, 1636-1976* (3d, rev. and enl. ed.). New York: Harper & Row.

Bubolz, M. M., & Sontag, M. S. (1993). Human ecology theory. In P. G. Boss, W. J. Doherty, R. LaRossa, W. R. Schumm & S. K. Steinmetz (Eds.), *Sourcebook of family theories and methods: A contextual approach* (pp. 419-448). New York: Plemum Press.

Ceci, S. J. (2006). Urie Bronfenbrenner (1917-2005). *American Psychologist, 61*(2), 173-174.

Chickering, A. W. (1974). *Commuting versus resident students: Overcoming the educational inequities of living off campus*. San Francisco: Jossey-Bass.

Cokley, K. (2000). Perceived faculty encouragement and its influence on college students. *Journal of College Student Development, 41*(3), 350-354.

Cokley, K., Komarraju, M., Patel, N., & Castillion, J. (2004). Construction and initial validation of the student-professor interaction scale. *College Student Affairs Journal, 24*(1), 32-51.

Corbin, J., & Strauss, A. (1996). Analytic ordering for theoretical purposes. *Qualitative Inquiry, 2*(2), 139-150.

Cornell University. (2005). The residential initiative. Retrieved May 13, 2005, from http://campuslife.cornell.edu/frames/?url=ri.campuslife.cornell.edu

Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks, CA: Sage.

Crotty, M. (1998). *The foundations of social research*. Thousand Oaks, CA: Sage.

Diamond, R. M. (1999). *Aligning faculty rewards with institutional mission: Statements, policies and guidelines*.Boston: Anker.

Edwards, K. E., & McKelfresh, D. A. (2002). The impact of a living learning center on students' academic success and persistence. *Journal of College Student Development, 43*(3), 395-402.

Eimers, M. T. (2000). The impact of student experiences on progress in college: An examination of minority and non-minority differences, *Annual Forum of the Association for Institutional Research*. Cincinnati, OH.

Einarson, M. K., & Clarkberg, M. E. (2004). Understanding faculty out-of-class interaction with undergraduate students at a research university, *Association for the Study of Higher Education*. Kansas City, MO.

Endo, J. J., & Harpel, R. L. (1982). The effect of student-faculty interaction on students' educational outcomes. *Research in Higher Education, 16*(2), 115-138.

Evans, N. J. (2002). The impact of a LGBT safe zone project on campus culture. *Journal of College Student Development, 43*(4), 522-539.

Evergreen State College. (2005). The National Learning Communities Project. Retrieved February 16, 2005, from http://learningcommons.evergreen.edu/02_nlcp_entry.asp

Evergreen State College. (2005). Seventh Annual National Summer Institute on Learning Communities. Retrieved February 16, 2005, from http://www.evergreen.edu/washcenter/

Fain, P. (2006). Rutgers board passes restructuring plan. *Chronicle of Higher Education, 52,* A32.

Firestone, W. A. (1987). Meaning in method: The rhetoric of quantitative and qualitative research. *Educational Researcher, 16*(10), 16-21.

Frankel, R., & Swanson, S. R. (2002). The impact of faculty-student interactions on teaching behavior: An investigation of perceived student encounter orientation, interactive confidence, and interactive practice. *Journal of Education for Business, 78*(2), 85-91.

Gabelnick, F., MacGregor, J., Matthews, R., & Smith, B. L. (1990). *Learning communities: Building connections among disciplines, students, and faculty.* San Francisco: Jossey-Bass.

Gardner, D. P. (1983). *A nation at risk: The imperative for educational reform. An open letter to the American people. A report to the nation and the secretary of education.* Washington, D.C.: National Commission on Excellence in Education.

Geraghty, M. (1996, October 18). A rural public university groups students into residential colleges. *Chronicle of Higher Education,* A57-A58.

Golde, C. M., & Pribbenow, D. A. (2000). Understanding faculty involvement in residential learning communities. *Journal of College Student Development, 41*(1), 27-40.

Griffore, R. J., & Phenice, L. A. (2001). *The language of human ecology: A general systems perspective.* Dubuque, IA: Kendall/Hunt.

Groves, R. M. (2004). *Survey Errors and Survey Costs.*Indianapolis, IN: Wiley.

Gubrium, J. F., & Holstein, J. A. (Eds.). (2002). *Handbook of interview research: Context and method.*Thousand Oaks, CA: Sage.

Harris, S. (2003). Rethinking academic identities in neo-liberal times. *Teaching in Higher Education, 10*(4), 421-433.

Henderson, S. E. (2005). Refocusing enrollment management: Losing structure and finding the academic context. *College and University, 80*(3), 3-8.

Hill, E. J., Ferris, M., & Martinson, V. (2003). Does it matter where you work? A comparison of how three work venues (traditional office, virtual office, and home office) influence aspects of work and personal/family life. *Journal Of Vocational Behavior, 63*(2), 220-241.

House, J. D. (1992). The relationship between academic self-concept, achievement-related expectancies, and college attrition. *Journal of College Student Development, 33*(1), 5-10.

Indiana University. (2005). Eighth Conference on Living-Learning Programs and Residential Colleges. Retrieved February 16, 2005, from http://www.livinglearning.indiana.edu/index.html

Inkelas, K. K., Johnson, D., Lee, Z., Daver, Z., Longerbeam, S., Vogt, K., et al. (2006). The role of living-learning programs in students' perceptions of intellectual growth at three large universities. *NASPA Journal, 43*(1), 115-143.

Inkelas, K. K., & Weisman, J. L. (2003). Different by design: An examination of student outcomes among participants in three types of living-learning programs. *Journal of College Student Development, 44*(3), 335-368.

Inkelas, K. K., Zeller, W. J., Murphy, R. K., & Hummel, M. L. (2006). Learning moves home. *About Campus, 11*(1), 10-16.

Inman, P., & Pascarella, E. (1998). The impact of college residence on the development of critical thinking skills in college freshmen. *Journal of College Student Development, 39*(6), 557-568.

Johnson, J. L., & Romanoff, S. J. (1999). Higher education residential learning communities: What are the implications for student success? *College Student Journal, 33*(3), 385-399.

Jones, P. R., Levine Laufgraben, J., & Morris, N. (2006). Developing an empirically based typology of attitudes of entering students toward participation in learning communities. *Assessment & Evaluation in Higher Education, 31*(3, June 2006), 249-265.

Kuh, G. D. (1995). The other curriculum: Out-of-class experiences associated with student learning and personal development. *Journal of Higher Education, 66*(2), 123-155.

Kuh, G. D. (2001). The effects of student-faculty interaction in the 1990s. *Review of Higher Education, 24*(3), 309-332.

Kuh, G. D. (2003). What we're learning about student engagement from NSSE. *Change, 35*(2), 24-32.

Kuh, G. D., & Documenting Effective Educational Practice (Project). (2005). *Student success in college: creating conditions that matter* (1st ed.). San Francisco: Jossey-Bass.

Kuh, G. D., Douglas, K. B., Lund, J. P., & Ramin-Gyurnek, J. (1994). *Student learning outside the classroom: Transcending artificial boundaries*. Washington, DC: George Washington University, School of Education and Human Development.

Kuh, G. D., Schuh, J. H., & Thomas, R. O. (1985). Suggestions for encouraging faculty-student interaction in a residence hall. *NASPA Journal, 22*(Winter), 29-37.

Kuh, G. D., Schuh, J. H., & Whitt, E. J. (1991). *Involving colleges*. San Francisco: Jossey-Bass.

Lamport, M. A. (1993). Student-faculty informal interaction and the effects on college student outcomes: a review of the literature. *Adolescence, 28*(112), 971-990.

Lerner, R. M., Fisher, C. B., & Weinberg, R. A. (2000). Toward a science for and of the people: Promoting civil society through the application of developmental science. *Child Development, 71*(1), 11-20.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.

Linnenbrink, E. A., & Pintrich, P. R. (2003). The role of self-efficacy beliefs in student engagement and learning in the classroom. *Reading and Writing Quarterly: Overcoming Learning Difficulties, 19*(2), 119-138.

Matthews, R. (1996). *Learning communities: A retention strategy that serves students and faculty*. Washington, DC: American Association of State Colleges and Universities.

McDonald, W. M., Brown, C. E., & Littleton, R. A. (1999). The Ernest L. Boyer laboratory for learning: A model for effective faculty involvement in residential programming. *College Student Affairs Journal, 19*(1), 35-43.

Metropolitan Community Colleges. (2004). Ninth Annual Conference on Learning Communities and Collaboration. Retrieved February 16, 2005, from http://www.kcmetro.edu/learningcommunities.asp?lc=6

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks, CA: Sage.

Murray State University. (2005). Residential Colleges at Murray. Retrieved February 16, 2005, from http://www.murraystate.edu/campus/residential_colleges/index.htm

National Institute of Education. (1984). *Involvement in learning: Realizing the potential of American higher education. Final report of the study group on the conditions of excellence in American higher education.* Washington, D.C.

National Survey of Student Engagement. (2005). National Survey of Student Engagement. Retrieved February 23, 2005, from http://nsse.iub.edu/

O'Hara, R. J. (2005). The collegiate way: Residential colleges and higher education reform. Retrieved January 19, 2005, 2005, from http://www.collegiateway.org

O'Meara, K. A. (2005). Encouraging multiple forms of scholarship in faculty rewards system: Does it make a difference? *Research in Higher Education, 46*(5), 479-510.

Pace, C. R. (1990). *College Student Experiences Questionnaire.*Bloomington, IN: Indiana University Center for Postsecondary Research and Planning.

Palmer, A., & Collins, R. (2006). Perceptions of rewarding excellence in teaching: Motivation and the scholarship of teaching. *Journal of Further and Higher Education, 30*(2), 193-205.

Parke, R. D. (2004). The society for research in child development at 70: Progress and promise. *Child Development, 75*(1), 1-24.

Pascarella, E. T. (1980). Student-faculty informal contact and college outcomes. *Review of Educational Research, 50*(4), 545-595.

Pascarella, E. T. (1984). College environmental influences on students' educational aspirations. *Journal of Higher Education, 55*(6), 751-771.

Pascarella, E. T. (1985). The influence of on-campus living versus commuting to college on intellectual and interpersonal self-concept. *Journal of College Student Personnel, 26*(4), 292-299.

Pascarella, E. T. (2001). Identifying excellence in undergraduate education: Are we even close? *Change, 33*(3), 19-23.

Pascarella, E. T., & Terenzini, P. T. (1991). *How college affects students: Findings and insights from twenty years of research.* San Francisco: Jossey-Bass.

Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students: A third decade of research* (Vol. 2). San Francisco: Jossey-Bass.

Pascarella, E. T., Terenzini, P. T., & Blimling, G. S. (1994). The impact of residential life on students. In C. Schroeder & P. Mable (Eds.), *Realizing the educational potential of residence halls.* (pp. 22-52). San Francisco: Jossey-Bass.

Pasque, P. A., & Murphy, R. (2005). The intersection of living-learning programs and social identity as factors of academic achievement and intellectual engagement. *Journal of College Student Development, 46*(4), 429-441.

Peshkin, A. (1988). In search of subjectivity -- One's own. *Educational Researcher, 17*(7), 17-21.

Pike, G. R. (1997, November 6-9). *The effects of residential learning communities on students' educational experiences and learning outcomes during the first year of college. ASHE Annual Meeting Paper.* Paper presented at the Annual Meeting of the Association for the Study of Higher Education, Albuquerque, NM.

Pike, G. R. (1999). The effects of residential learning communities and traditional residential living arrangements on educational gains during the first year of college. *Journal of College Student Development, 40*(3), 269-284.

Pike, G. R., Schroeder, C. C., & Berry, T. R. (1997). Enhancing the educational impact of residence halls: The relationship between residential learning communities and first-year college experiences and persistence. *Journal of College Student Development, 38*(6), 609-621.

Platt, J. (2002). The history of the interview. In J. F. Gubrium & J. A. Holstein (Eds.), *Handbook of interview research: Context and method* (pp. 33-54). Thousand Oaks, CA: Sage.

Renn, K. A. (2003). Understanding the identities of mixed-race college students through a developmental ecology lens. *Journal of College Student Development, 44*(3), 383-403.

Renn, K. A., & Arnold, K. D. (2003). Reconceptualizing research on college student peer culture. *Journal of Higher Education, 73*(3), 261-291.

Riker, H. C. (1965). *College housing as learning centers.* Washington, D.C.: American College Personnel Association.

Rossman, G. B., & Rallis, S. F. (1998). *Learning in the field: An introduction to qualitative research.* Thousand Oaks, CA: Sage.

Rowe, L. P. (1981). Environmental structuring: Residence halls as living learning centers. In G. S. Blimling & J. H. Schuh (Eds.), *Increasing the educational roles of residence halls* (Vol. 13, pp. 51-64). San Francisco: Jossey-Bass.

Rubin, H. J., & Rubin, I. S. (2005). *Qualitative interviewing: The art of hearing data* (2nd ed.). Thousand Oaks, CA: Sage.

Sax, L. J., Bryant, A. N., & Berger, J. B. (2005). The differential effects of student-faculty interaction on college outcomes for women and men. *Journal of College Student Development, 46*(6), 642-659.

Schroeder, C. (1981). Student development through environmental management. In G. S. Blimling & J. H. Schuh (Eds.), *Increasing the Educationsl Roles of Residence Halls* (Vol. 13, pp. 35-50). San Francisco: Jossey-Bass.

Schroeder, C. C. (1981). Student development through environmental management. In G. S. Blimling & J. H. Schuh (Eds.), *Increasing the educational roles of residence halls* (Vol. 13, pp. 35-50). San Francisco: Jossey-Bass.

Schroeder, C. C., & Hurst, J. C. (1996). Designing learning environments that integrate curricular and cocurricular experiences. *Journal of College Student Development, 37*(2), 174-181.

Schroeder, C. C., & Mable, P. (1994). *Realizing the Educational Potential of Residence Halls. Jossey-Bass Higher and Adult Education Series.*California: Jossey-Bass Inc., 350 Sansome St., San Francisco, CA 94104.

Schroeder, C. C., & Mable, P. (1994). Residence halls and the college experience: Past and present. In C. Schroeder & P. Mable (Eds.), *Realizing the educational potential of residence halls.* (pp. 3-21). San Francisco: Jossey-Bass.

Schuh, J. H., & Kuh, G. D. (1984). Faculty interaction with students in residence halls. *Journal of College Student Personnel, 25*, 519-528.

Schunk, D. H. (2003). Self-efficacy for reading and writing: Influence of modeling, goal setting, and self-evaluation. *Reading and Writing Quarterly: Overcoming Learning Difficulties, 27*, 257-276.

Schwandt, T. A. (1997). *Qualitative inquiry: A dictionary of terms*. Thousand Oaks, CA: Sage.

Seidman, I. E. (1991). *Interviewing as qualitative research: A guide for researchers in education and the social sciences*. New York: Teachers College Press.

Seymour, J. (2002). Tracking the process of change in US undergaduate education in the sciences, mathematics, engineering, and technology. *Science Education, 86*(1), 79-105.

Shapiro, N. S., & Levine, J. H. (1999). *Creating learning communities: A practical guide to winning support, organizing for change, and implementing programs*. San Francisco: Jossey-Bass.

Slavin, R. E. (1991). Synthesis of research on cooperative learning. *Educational Leadership, 48*, 71-82.

Smith, B. L. (2001). The challenge of learning communities as a growing national movement. *peer Review, 4*(1).

Smith, E. L. (1991). A conceptual change model of learning science. In S. M. Glynn, R. H. Yeany & B. K. Britton (Eds.), *The psychology of learning science* (pp. 43-63). Hillsdale, NJ: Erlbaum.

Stassen, M. L. A. (2003). Student outcomes: The impact of varying living-learning community models. *Research in Higher Education, 44*(5), 581-613.

Stimpson, R. (1994). Creating a context for educational success. In C. Schroeder & P. Mable (Eds.), *Realizing the educational potential of residence halls* (pp. 53-69). San Francisco: Jossey-Bass.

Talburt, S., & Boyles, D. (2003). Reconsidering learning communities: Expanding the discourse by challenging the discourse, *Association for the Study of Higher Education*. Portland, OR.

The Carnegie Foundation for the Advancement of Teaching. (1990). *Campus life: In search of community*. San Francisco: Jossey-Bass.

The Regents of the University of California. (2001). Theme housing. Retrieved April 23, 2005, from http://www.housing.ucla.edu/housing_site/oncampus/theme.htm

The Trustees of Princeton University. (2005). Residential colleges. Retrieved February 16, 2005, from http://www.princeton.edu/Siteware/ResColleges.shtml

Thompson, E. S., II. (2004). The lawn -- Jefferson's vision for a living, learning environment. *The Journal of Sigma Phi Epsilon, 102*(1), 8-10.

Thompson, M. D. (2001). Informal student-faculty interaction: Its relationship to educational gains in science and mathematics among community college students. *Community College Review, 29*(1), 35-57.

Tierney, W. G. (2001). Reforming tenure in schools of education. *Phi Delta Kappan, 82*(7), 550-554.

Tinto, V. (1987). *Leaving college: Rethinking the causes and cures of student attrition*. Chicago: The University of Chicago Press.

Tinto, V. (1997). Classrooms as communities: Exploring the educational character of student persistence. *Journal of Higher Education, 68*(6), 599-623.

Tinto, V. (1998). Colleges as communities: Taking research on student persistence seriously. *Review of Higher Education, 21*(2), 167-177.

Torres, V., & Baxter Magolda, M. B. (2002). The evolving role of the researcher in constructivist longitudinal studies. *Journal of College Student Development, 43*(4), 474-489.

U. S. Department of Education. (2006). *A test of leadership: Charting the future of U. S. higher education*.Washington, D.C.

Umbach, P. D., & Wawrzynski, M. R. (2005). Faculty do matter: The role of college faculty in student learning and engagement. *Research in Higher Education, 46*(2), 153-185.

van Manen, M. (1990). *Researching lived experience: Human Science for an action sensitive pedagogy*. Albany, NY: SUNY Press.

vanderHeyden, M. A. (2001). Measures of quality in higher education -- an American perspective, *International Perspectives on Quality in Higher Education*.Oxford, England: Educational Policy Institute of Virginia Tech.

Walkington, J. (2005). Becoming a teacher: Encouraging development of teacher identity through reflective practice. *Asia Pacific Journal of Teacher Education, 33*(1), 53-64.

Warren, C. A. B. (2002). Qualitative interviewing. In J. F. Gubrium & J. A. Holstein (Eds.), *Handbook of interview research: Context and method* (pp. 83-101). Thousand Oaks, CA: Sage.

Weinberg, A. (2005). An alternative to the campus as club med. *Chronicle of Higher Education, 52,* B13.

Williams, R. (1985). *Keywords: A vocabulary of culture and society* (Revised Edition ed.). New York: Oxford University Press.

Wilson, P. (1996). A call for closer professor-student relationships: Students at the University of Alaska, Fairbanks speak out. *Anthropology and Education Quarterly, 27*(3), 432-441.

Wingspread Group on Higher Education. (1993). *An American imperative: Higher expectations for higher education*. Racine, WI: Johnson Foundation.

Woodside, B. M., Wong, E. H., & Wiest, D. J. (1999). The effect of student-faculty interaction on college students' academic achievement and self concept. *Education, 119*(4), 730-733.

Wright, M. (2005). Always at odds? Congruence in faculty beliefs about teaching at a research university. *Journal of Higher Education, 76*(3), 331-354.

Young, P. (2006). Out of balance: Lecturers' perceptions of differential status and rewards in relation to teaching and research. *Teaching in Higher Education, 11*(2), 191-202.

Zeller, W. J. (1994). Residential learning communities: Creating connections between students, faculty, and student affairs departments. *The Journal of College and University Student Housing, 24*(2), 37.

Zheng, J. L., Saunders, K. P., Shelley, M. C., & Whalen, D. F. (2002). Predictors of academic success for freshmen residence hall students. *Journal of College Student Development, 43*(2), 267-283.

Zimmerman, B. J. (2000). An essential motive to learn. *Contemporary Educational Psychology, 25*, 82-91.