THE ROLE OF SOCIAL INTEGRATION IN STUDENTS' PSYCHOSOCIAL DEVELOPMENT

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To my grandfather in heaven

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CHAPTER I

INTRODUCTION

The more time and effort students invest in the learning process and the more intensely they engage in their own education, the greater will be their growth and achievement, their satisfaction with their educational experiences, their persistence in college, and the more likely they are to continue their learning.
--The Study Group on the Condition of Excellence in American Higher Education, 1984.

In our society today, a high school degree is no longer sufficient to meet the increasingly complex demands of the modern workforce.   Even many community and junior college students find it necessary to obtain a four-year degree in order to realize occupational and lifestyle goals.   As a result, colleges and universities are being challenged to produce graduates with improved knowledge, cognitive and technical skills, attitudes, and values for a fast growing workforce.   Based on the presuppositions that people are able to change, and educators and educational environments can affect change (Winston and Miller, 1987), Chickering (1981) has stated that the main purpose of higher education should be to encourage intentional psychosocial developmental changes in students.

Studies have shown that changes occur as students progress through their college career (Brown, 1972; Winston and Miller, 1987).   Not only does change occur in the students' academic and social development, but also in their psychosocial development.   Chickering's theory of psychosocial development (1969, 1993) claims that it is essential for students to go through seven vectors of development in order to establish a self-identity.   In Chickering's theory of psychosocial development, "vectors" instead of "stages" are used because there is no set time line for students to be at particular points at particular times.

Although one would expect students to move forward sequentially, it is possible for a student to skip to a higher vector before developing a lower vector.   At the same time, a student can just as well regress to any preceding vector if he fails to successfully complete the task of a current vector.   Thus, the term, "vector" provides much greater "direction and magnitude" (Chickering, 1993, p.xv).   These seven vectors are: (1) developing competence; (2) managing emotions; (3) moving through autonomy toward interdependence; (4) developing mature

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interpersonal relationships; (5) establishing identity; (6) developing purpose; (7) and developing integrity.   Chickering further asserted that the freshman year in college plays a particularly significant role in overall student development because the first three vectors are typically developed during this year.

However, in order for institutions to encourage developmental change in students, they need to first retain the students.   In an influential model of student departure, Tinto (1993) asserted that for students to successfully matriculate in college, they must first leave their family, friends, and community fully behind in order to interact with the new institutional setting. Accordingly, students who fail to integrate fully with the institution or who maintain values at deep odds with their institution are more likely to withdraw.   In Tinto's student interactional model, both academic and social integration are essential for student persistence at four-year residential universities.   Other researchers (Astin, 1977; Kuh, Schuh, and Whitt, 1991; Pascarella and Terenzini, 1991) have emphasized the critical role that the students' involvement and commitment to their new institution play in their persistence and success.

According to Chickering (1969, 1993), the freshman year is significant in establishing patterns for subsequent personal growth.   At the same time, based on Tinto's theory of student departure, the freshman year also plays a significant part in student persistence.   If these theories are correct, and the freshman year indeed plays such a significant role in both academic and psychosocial development, the question becomes *what should higher education professionals do to ensure "optimal" development for the students?*   Coincidentally, since studies have shown that social integration plays a substantial role in students' persistence[*], does social integration play an equally important role in students' psychosocial development?

In this study, the role of social integration in students' psychosocial development is investigated.   In other words, do students who achieve higher levels of social integration by the end of their freshmen year achieve greater levels of psychosocial development by the end of their senior year than students who achieve only low levels of social integration during their freshmen year?   With the assistance of social integration in Tinto's interactional theory, a positive result

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[*] According to the study done by Braxton, Sullivan, and Johnston (1997) academic and social integration indeed to play a significant role in persistence for four-year residential institutions; however, it only has moderate influence on two-year institutions.

for this study should provide confirming evidence for strengthening Chickering's psychosocial development theory. Chickering's theory forms the basis of this study not only because Chickering is recognized as one of the most prominent psychosocial theorists, but also because he has a comprehensive theory. Pascarella and Terenzini (1991) have noted that no other theorist has had a greater influence on the study of college student development. Although it would be insightful to include the effect of academic integration in students' psychosocial development, it has been left out of this study due to the inconsistency in how academic integration is defined in higher education studies (Braxton and Lien, 2000).

<u>Conceptual Framework</u>

Up to the present, many studies have been conducted on factors that lead to student persistence, but few studies have directly examined the relationship between social integration and the student's psychosocial development. Exactly what is Social Integration and why should it influence psychosocial development? Quite simply, social integration refers to the students' sense of 'fit,' and lack of isolation with the social system of an institution and/ or its subcultures (Tinto, 1975, 1993). For students who are well integrated into such systems of the institution, they are not "at odds" with the institutions nor are they isolated from the daily activities of the institution (Tinto, 1975, 1993).

Social Integration can also be viewed as the students' level of comfort or acceptance with the social system of an institution and/ or its subcultures. More specifically, Kuh and Love defined it as "social integration refers to students' level of social and psychological comfort with their colleges' milieus, association with or acceptance by affinity groups, and a sense of belonging that provides the security needed to join with others in common causes, whether intellectual or social" (Kuh and Love, 2000, p.159).

If a student is well integrated into the institution, then he or she will feel in congruence with the institution. Specifically, if a student is well integrated into one or more of the communities within the institution, then the student will have the self-perception of being a part of that particular community or communities. Similarly, students who are integrated well with faculty members and peers feel a strong sense of acceptance; this in turn assists them in growing both intellectually and personally (Kuh, Schuh, and White, 1991).

Following the framework that social integration is a student's 'fit' into the institution and lack of isolation with the social system of the institution or subcultures within the institution, one can logically assume that if a person feels in congruence with a particular group or community, then that person is more likely to engage or to interact with that group or community. If that person becomes more engaged with the community that helps him or her feel accepted or valued, then he or she will develop a better sense of self and thus gain a better purpose in life.

In other words, one can logically propose that students who are socially integrated would have the 'psychological energy' to invest more time with the group or community (Astin, 1984; Braxton, Milem & Sullivan, 2000). When more time is invested with the group or community, providing challenge yet support for the students, students become better developed psychosocially (Stage, 1991). Another perception is that students who are socially integrated into the social system of an institution develop a new 'repertoire' of psychosocial skills and attitudes (Hagedorn, Pacarella, Edison, Braxton, Nora, & Terenzini, 1999).

In seeking factors that influence development, Terenzini and Wright (1987) conducted a study examining the impact of academic integration on cognitive development using faculty-student interaction. Pascarella and Terenzini (1978) examined the influence faculty have on students during their four years of undergraduate education. Both studies have shown that faculty-student interaction correlates positively with self-perceived intellectual and personal development.

However, aside from having a positive influence on cognitive development, other studies have also shown faculty-student interaction to correlate positively with psychosocial development, specifically in ones' competence, autonomy (Erwin and Love, 1989), identity, purpose, and integrity (Chickering, 1969; 1993; Endo and Harpel, 1982; Org and Brasskamp, 1988; Stakenas, 1972).

Chickering, together with Reisser, also noted seven key influences on student development (1993): (1) Clear and Consistent Objectives; (2) Institutional Size; (3) Student-Faculty Relationships; (4) Curriculum; (5) Teaching; (6) Friendships and Student Communities; and (7) Student Development Programs and Services.

Although it is important to test how each of these factors influences each of Chickering's seven vectors, the main focus here is on factors derived from social integration. Thus, only

student-faculty relationships, friendships and student communities are discussed in greater detail.

Faculty-Student Interaction

Faculty-Student interaction is often thought to be the key influence on student development during the course of their undergraduate years. As noted by Feldman and Newcomb in 1969, the burden of fostering intellectual and personal development of students has often fallen on the faculty. Chickering, as indicated by the importance he placed on the interaction, has hypothesized that when students have frequent friendly interactions with faculty members, their development of intellectual competence, sense of competence, autonomy and interdependence, purpose, and integrity are often enhanced (Chickering and Reisser, 1993).

Seeking the exact influence of faculty on students, numerous studies have also been conducted on the specific relationships between faculty interaction and positive student intellectual and personal growth and development. Terenzini and Wright (1987b) and Pascarella and Terenzini (1978) have conducted studies to determine faculty influences on academic integration. Based on their study, they concluded that academic integration, measured by five indices: (1) Frequency of academic contact with faculty; (2) Frequency of non-academic or social contact with faculty; (3) Perceived faculty concern for students and dedication to teaching; (4) Classroom activities; and (5) Faculty relationship, plays a role in students' academic growth and development over each of the four years they are in school.

Their research also identified that the frequency and strength of faculty-student contact might make significant contributions both extrinsically and intrinsically, such as in academic performance, and self-perceived intellectual and personal development. Additionally, Pascarella and Terenzini (1978) noted that student-faculty contact is influenced by the student's first encounter with the faculty. If the contact is positive, more contact will generally result. If their first contact with a faculty member is negative, then further contact with the faculty may be avoided. Subsequent to these initial contacts, faculty-student interaction has increasing influence in the freshman and sophomore years on academic growth and development, but decreasing influence in the junior and senior terms. During these last two years, social contact and social integration play a more significant role in the academic and personal growth of students. Finally, they suggest that the level of academic integration is related to the previous

year and the effects of involvement may be cumulative; this leads to the assumption that a high level of involvement during the first year of college may lead to even greater levels of development in later years (Pascarella and Terenzini, 1978; Terenzini and Wright, 1987b).

Endo and Harpel (1982) found similar results in a study examining the effects of faculty advising quality, the frequency of faculty-student interactions, and the perceived helpfulness of faculty both in and out of class. From their findings, Pascarella and Terenzini (1991) also confirmed that informal faculty student interaction has a significant influence on student development in areas including intellectual growth, intellectual orientation, liberalization of values, increased autonomy and independence, increased interpersonal skills, gains in general maturity and personal development, satisfaction with college, and freshman to sophomore persistence.

In addition to gains in personal and academic development, several studies have also shown that increased informal student-faculty interaction results in satisfaction with the overall quality of education and persistence in obtaining the degree, (Astin, 1984; Newcomb et al., 1970; Pascarella and Terenzini, 1976; Theophillides et al., 1984; and Wilson et al.,1975).

Friendships and Student Communities

Student interaction with fellow peers explains a major part of students' development. Chickering (1974) has stated, "the student culture either amplifies or attenuates the impact of curriculum, teaching and evaluations, residence hall arrangements, and student faculty relationships." In addition, Chickering and Reisser claim that "when students are encouraged to form friendships and to participate in communities that become meaningful subcultures, and when diversity of backgrounds and attitudes as well as significant interchanges and shared interests exist, development along all seven vectors is fostered" (Chickering and Reisser, 1993, p. 316).

Several studies have examined the impact of peer interaction on student development. Moos (1979) suggested that peer experiences, such as style of coping with college life, personal interest and values, self-concept, health-related issues, aspirations, and academic achievement, mediate the direct effects of the environment on changes in student development. Peer experiences also include a realm of other experiences, such as dating behaviors, interpersonal

involvement, social orientation of the institution, emotional support, and the effect of rules and regulations.   In 1991, Kaufman and Creamer found that beneficial, positive interactions with one's peers correlate positively with personal and intellectual outcomes.   From their reviews, Pascarella and Terenzini (1991) supported the notion that student interaction with their peers has a strong influence in aspects of attitudinal and psychosocial change.

Student communities: Greek affiliation

Breaking down the student communities even further, it is important to examine the influence of the Greek experience on students' psychosocial development. For some students, their whole college experience can be wrapped around their Greek organization.   Does Greek involvement benefit or hurt the students' development?   What about social activities such as binge drinking and hazing, which are generally associated with Greek organizations?

According to many recent studies, Greek organizations can have significant impact on students' development, both negatively and positively (Kuh, Pascarella and Wechsler, 1996; Pascarella, Whitt, Nora, Edison, Hagedorn, and Terenzini, 1996; Terenzini, Pascarella, and Blimling, 1996).   In the study done by Pascarella et al. (1996), being affiliated with a Greek organization can have a negative influence on students' cognitive development by the end of their freshman year.   The result of hindrance to the cognitive development for Greek affiliated members is surprising since studies have also shown that the Greek experience can promote team work, generate leadership learning opportunities, and enhance one's opportunities to develop mature interpersonal skills and personal identity (Astin, 1977; Byer, 1998; Dollar, 1966; Pike, 2000; Winston and Saunders, 1987).   If Greek affiliation promotes involvement, and involvement is positively correlated with cognitive development (Astin, 1993; Kuh, Vesper, Conolly, and Pace, 1997; Pascarella and Terenzini, 1991), then Greek affiliation should assist and not hinder cognitive development.

After his study in 2000, Pike stated that since Greek affiliation has a significant direct influence on social involvement and integration of college experiences and an indirect influence on gains in abilities associated with cognitive development, the study done by Pascarella, et al., 1996 may have masked the positive indirect relationship between Greek affiliation and cognitive development by controlling for college experience in a regression-based analysis.   Moreover,

Pike's study reconfirmed the theory that involvement is positively correlated with cognitive development.   If Greek affiliation promotes involvement, which leads to integration and positive cognitive development in students, does it also lead to positive psychosocial development?

According to Astin in *What Matters in College,* "The student's peer group is the single most potent source of influence on growth and development in the undergraduate years" (1993, p.398).   Since Greek organizations play a very prominent role in colleges today, it is important for one to also study its implications on students' psychosocial development.

Following Tinto's framework where pre-college experience leads to various initial institutional commitments that influence the students' academic and social integration and hence degree attainment, the integration of students into the institution seems to positively influence students' growth both academically and socially.   If the students' integration into the institution has a positive influence on the students' growth both academically and socially, then one can logically conclude that students who are better integrated will have a better sense of self, in both the present and the future.   Following the same logic, it can also be held that students who integrate more fully into the institution will become more developed psychosocially than students who are less integrated. Since few studies have been done on the impact of social integration on students' psychosocial development, it is essential for institutions that have some policy or programmatic guiding decisions in understanding whether the impact of social integration facilitates or impedes the students' psychosocial development (Terenzini and Wright, 1987).

In this particular study, how the college environment influences the students' psychosocial development is examined.   Specifically, how factors of the students' social integration affect the students' psychosocial development will be shown.   It is hypothesized that students who have integrated into the institution socially; in relationship with both faculty and peers, possess advanced psychosocial development.

Similar to but different from the study conducted by Terenzini and Wright (1987), the influence of integration on student development is examined; however, instead of *academic* integration, only the influence of *social* integration will be examined due to the inconsistency of components within academic integration (Braxton and Lien, 2000).   Most importantly, instead of using students' perceptions of their own intellectual and personal development, the data is

gathered using the **S**tudent **D**evelopment **T**ask and **L**ifestyle **I**nventory survey which is designed specifically to measure aspects of the students' psychosocial development.

CHAPTER II

STUDENTS' PSYCHOSOCIAL DEVELOPMENTAL PROCESS:
A LITERATURE REVIEW

A Review of Psychosocial Theories

Erikson: Father of Psychosocial Theories

In order to understand students' psychosocial development, several theorists have each attempted to define it based on their own individual studies.   However, each has the same underlying theme: development progresses throughout ones' lifespan   (Miller and Winston, 1990).   It occurs as the individual matures and interacts with the environment from simple tasks to more complex tasks.   At the same time, development is cumulative.   Thus, certain developmental stages must be accomplished before one can move forward to a more advanced, complex stage.   "Stage" defines a certain period during one's lifespan when "biological, psychological, and sociological forces interact to promote crisis that require responses (Thieke, 1994, p.28)."

Most psychosocial theorists have built their ideas upon the work of Erikson (1959) and Sanford (1966).   Erikson (1959) has built upon Freud's idea that a child's age predicts a certain stage of development or "fixation" (Chickering, 1993).   Erikson carried Freud's theory a step further.   He asserted the idea that growth is based on a   "master plan" which is shaped by the environment.   He also formulated the idea of developmental stages and focused on the establishment of "identity" (Widdick, Kneffelkamp, and Parker, 1985).

Other Development Theories

Although Erikson was the first psychosocial theorist, he focused his theory mainly on the establishment of "identity."   In order to address issues pertinent to college students, other theorists have expanded upon Erikson's work and focused on the development of college students.   These theorists include: Sanford (1966), Marcia (1966), Josselson (1987), Perry (1970), Kohlberg (1964), and Chickering (1969, 1993).

Similar to Erikson's idea, Sanford (1966) constructed a developmental theory.   However, the core of Sanford's theory focuses on personality development during college years versus establishment of "identity."   His major contribution was his notion of challenge and support from the external environment in order for individuals to develop (Evans, 1996, Sanford, 1966). Sanford identified five stages of development during the college years: (1) Stabilizing of the ego identity; (2) Deepening of interests; (3) Increasing freedom in personal relationships; (4) Humanizing of values; and (5) General development and strengthening of the ego.   In addition to identifying the five stages of development, Sanford also specified several factors which he felt would influence development.   They are: (1) The overall culture of the college; (2) The various subcultures within the college; (3) The college's faculty, administration, and students; (4) The American society in general; and (5) Family, community, and social class memberships (Sanford, 1966, Thieke, 1994).

Marcia (1966) constructed his theory by expanding on Erikson's core stage, Identity versus Role Confusion.   In his study of male college students, he found that identity formation is based on the resolution of two psychological tasks: Experiencing "crisis" while making decisions involving several alternatives, and determining the extent of their occupational and ideological commitments based on their decisions.   In women college students, four types of identity resolution were found (Schenke and Marcia, 1972).   They are: Identity Diffusion, Foreclosure, Moratorium, and Identity Achievement.

Identity Diffusion.   A crisis may or may not have been experienced.   A commitment has not been made, but the person is not particularly concerned about his or her lack of direction.

Foreclosure.   No crisis has been experienced.   A commitment has been made based on others', particularly parents', values.

Moratorium.   The individual is in a period of crisis and is struggling to make a commitment.

Identity Achievement.   A crisis period has been experienced and a commitment has been made.

It is also important to clarify that students do not need to progress through all four types in sequential order to achievement identity development; nor do they necessarily achieve identity development once all four types have been met.   Marcia's studies on male and female students showed that not all students develop their "identity" through the same procedures.   Thus, it is

vital for institutions to provide different types of intervention to assist in the development of "identity" for different types of students (Evans, 1996; Schenke and Marcia, 1972).

Following the work of Schenkel and Marcia, Josselson (1987) also did her study on women college students. From her study, Josselson discovered that relationships for women students with male students play a much more important factor in self-identity development than vocational or intellectual achievements. Josselson's work showed that women and men are influenced by different factors when it comes to their identity development.

William Perry (1970) postulated that development occurs along nine positions grouped in three clusters: Modifying of Dualism, where everything is seen in a dualistic perspective; The Realizing of Relativism, where individuals begin to perceive other perspectives and that truth is relative; and finally, Evolving of Commitments in Relativism, where individuals establish an identity based upon their assimilation of ideas, values, and behaviors. Perry centered his theory around cognitive and ethnical growth.

Lawrence Kohlberg (1964) developed a theory which focuses specifically on moral development. It attempts to chart cognitive development on the basis of the processes by which moral choices are made. He identified three levels of reasoning: Pre-conventional, where behavior is guided by the nature of the consequences and to satisfy ones own needs; Conventional, which is guided by the fulfillment of the expectations of others and the respect for authority; and Post-conventional or Principled, which emphasizes equality and mutual obligations within a democratically established order.

Chickering's Psychosocial Development Theory

Based on Erikson's theory on establishment of an "identity" as the dominant developmental task, Chickering (1969, 1993) proposed seven "vectors" of psychosocial development critical in determining self-identity for college students. Although the vectors have more direction and magnitude, they build upon one another from simpler tasks to more difficult tasks. Instead of focusing on only emotional, social, moral, or intellectual development, Chickering's psychosocial includes these aspects and focuses on much more. His theory is comprehensive. Chickering's (1993) seven vectors are:

1. *Developing Competence.* This vector focuses on the development of intellectual competence, physical and manual competence, and social and interpersonal competence.

Intellectual competence requires one to develop the skill to comprehend, analyze, and synthesize information.   It is a skill for one to use his/her mind.   Physical and manual competence is comprised of skills such as athletic and artistic achievement, and gaining self-discipline.   Social and interpersonal competence is comprised of skills such as learning to emphasize, understand, and foster relationships with others.

2. *Managing Emotions.*   This vector involves the process of attempting to understand ones negative emotions, not avoiding them, and learning appropriate ways to express them.   At the same time, students need to be aware of their positive emotions.   Once students are aware of the positive emotions, then they can learn to maintain them.   By learning appropriate methods of expression, larger ranges of feelings and emotions may be experienced.

3. *Moving Through Autonomy Toward Interdependence.*   The core of this vector is learning to function self-sufficiently.   This vector consists of three components: 1. Emotional independence, becoming free from the need for continuing reassurance, affection, and approval; 2. Instrumental independence, this involves the ability to engage in activities and cope with problems without seeking help and being flexible with regard to one's needs; 3. Accepting interdependence, being able to fit in and develop a niche in the larger world; giving and taking as necessary is critical to achieving this vector.   (Note: This vector was previously titled *Developing Autonomy.)*

4. *Developing Mature Interpersonal Relationships.*   This vector involves developing tolerances for a wider range of people through increased capacity to respond to people as individuals, rather than as stereotypes.   It also involves changing the quality of intimate relations, with more focus on trust, independence and individuality, and tolerance for differences and disagreement.   (This vector was previously titled *Freeing Inter-Personal Relationships* and came after *Establishing Identity.)*

5. *Establishing Identity.*   This vector is considered critical in the development of the person. It follows from the achievement of the first four vectors and also involves clarification of concepts regarding physical needs, characteristics and personal appearance, and sexual identification and sex appropriate roles and behavior.   Finally, achieving a solid sense of identity helps foster change in the later vectors of development.

6. *Developing Purpose.*   This vector involves developing increasing clarity and conviction in three areas: recreational interests, career plans, and general lifestyle considerations.

7. *Developing Integrity.* This vector involves the development and clarification of a personally valid set of beliefs that have some internal consistency and provide at least a tentative guide for behavior.   It involves three overlapping stages: 1. A shift from the belief in the absoluteness of rules to a more relative view with connections between the rules and the purposes they were meant to serve; 2. An examination and personalization of the values that were learned from parents, keeping some, discarding some, and modifying others to fit the individuals new needs;   and 3. The achievement of behavior that is consistent with the

personalized values that are held (Chickering 1969, Chickering and Reisser, 1993).

The theories described above are only a select few among the more prominent psychosocial development theories.   Each of these theories offers a way of mapping how students change over the course of their academic career by focusing on different aspects of the developmental process.   In an effort to define psychosocial development, this study focuses specifically on Chickering's theory of Psychosocial Development (1969, 1993).   Again, Chickering was selected because he is recognized as one of the most prominent psychosocial theorists.

<u>Exploration of Chickering's Psychosocial Development Theory</u>

Since Chickering's psychosocial development theory is one of the most cited in the students' developmental theory, a significant number of researchers have conducted studies to explore factors which influence the development of Chickering's vectors.   It is important to take a quick view of what these researchers have found in the vectors tested: Moving through Autonomy toward Interdependence, Developing Mature Interpersonal Relationships, Establishing Identity, and Clarifying Purpose.

Moving through Autonomy toward Interdependence

In a study of gender difference, Green and Tinsley (1988) discovered that intimacy is the best predictor of autonomy for both men and women.   "Class level, sex-role self-concept, and work role salience were weak but significant predictors of autonomy (Green and Tinsley, 1988, p. 517)."   In a study to find whether Greek life, work-study programs, and student in relationships have any influence on Chickering's vectors, Erwin and Love (1989) found that fraternity members score higher in their autonomy than off campus residents, and work study students have higher autonomy than students who received loans or no financial aid.   They have also confirmed Green and Tinsley's (1988) study that intimacy is the best predictor of autonomy by showing that students who dated often have higher levels of autonomy than those who dated infrequently.

Taub (1995), in a study targeting women development, showed that the development of freeing interpersonal relationships reflects the development of autonomy.   In other words, for

women, development of mature interpersonal relationships and development of autonomy are not separate. In fact, they are highly correlated with one another. In a study done in 1997, Taub confirmed Green and Tinsley's (1988) study that class level increases autonomy since seniors were found to be more independent than freshmen when autonomy and parental attachment in various ethnic groups were studied. The study also showed that women seem to "experience emotional independence from peers prior to emotional independence from parents (Taub, 1997, p. 651)."

Developing Mature Interpersonal Relationships

In studies pertaining to factors influencing the development of mature interpersonal relationships, Erwin and Love (1989) found that students who have dated have higher mature interpersonal relationships. Hood (1984) showed that participation in campus organizations and recreational activities has a positive influence on students' development of mature interpersonal relationships. Riahinejad and Hood (1984) also showed that participation in extracurricular activities has a significant influence on the development of students' mature interpersonal relationship. However, Martin (2000) found very little support for mature interpersonal relationships in collegiate experience. Topics of conversation and campus residency are weakly related and no evidence in any other types of student community factors appears to have significant influence. Gender was also found to have no influence on the development of mature interpersonal relationships. Thieke (1994b) brings in new factors with influences on Chickering's vectors. Thieke's study showed that students with lower SAT scores have higher mature interpersonal relationships than students with higher SAT scores. At the same time, non-minorities are more likely to have higher scores on their mature interpersonal relationship development at the end of the freshman year.

Establishing Identity

Hood (1984) stated that participation in campus activities boosts confidence, which in turn facilitates ones' identity development. Erwin and Kelly (1985) confirmed that satisfaction with academic performance and commitment to career decision assists ones' own identity development. Burt and Halpin (1998) showed that African American identity is strongly

influenced by the family and community.

Developing Purpose

Thieke (1994b) found that not only do extracurricular activities have significant relationship to developing purpose, but faculty and student interactions also have significant influence on developing purpose.   Martin (2000) confirmed that faculty-student interaction has a strong relationship with the development of purpose and sense of competence.   Martin's study also shows that the development of purpose is influenced by clubs and organizations, student acquaintances, topics of conversation, and information in conversations .

Sequence of the vectors

Straub and Rodgers (1986) showed that development of autonomy in women may come in later than development of autonomy in men and that their development of mature interpersonal relationships may come earlier than in Chickering's 1969 theory.   In other words, the development of mature interpersonal relationships precedes the development of autonomy. Straub's study in 1987 further showed that not only does a relationship precede autonomy, but the development of mature interpersonal relationships also has a significant influence on the development of autonomy.

From the studies stated above, it is clear that there has been no emphasis on the influence of social integration on Chickering's vectors even though many studies have been done on the influence of various factors on the development of Chickering's vectors.   The closest factors to social integration were faculty-student interaction and peer-interaction.   Thus, it is imperative to conduct a new study to explore the influence of social integration on the development of Chickering's vectors.

Critique of Chickering's Psychosocial Development Theory

Although Chickering's theory has been widely used and accepted, it does not mean his theory is flawless.   Several researches, including Chickering himself, have been critical of his original theory, particularly of the order of the vectors.   Recognizing the critiques of other researches and his own, Chickering, together with Reisser, produced a revised version of his

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original theory.   Although this present study focuses on Chickering's revised version of psychosocial development theory, it is still important to examine the original theory to have a more in-depth understanding of its history.

In the article, "Arthur Chickering's Vectors of Development," by Widdick, Parker, and Knefelkamp (1978), the authors pointed out that although Chickering's theory is empirically grounded, it still lacks details on the achievement of each vector.   Greater details are needed in the specific steps required for the completion of each vector.   In addition, Widdick, Parker, and Knefelkamp noted that Chickering's description of the process of development is too general; furthermore, he did not address the different levels of student motivation and behavior for each vector.   Finally, Widdick, Parker, and Knefelkamp emphasized that more specific information in the area of intellectual development and cognitive competence would enhance the theory.

Chickering himself acknowledged several shortcomings of the original theory presented in his book, Education and Identity (1969).   Specifically, it is written for practitioners to improve their practice and not for the purpose of advancing theory.   Thus, in order for the book to be useful to all practitioners, it was written in an accessible and easy-to-read format.   In other words, technical details covering the variation in institutions and students were not included in the book.   As a result, Chickering's theory may have been too general to be useful for researchers (Chickering and Reisser, 1993).

In addition to the generality of his theory, Chickering also noted that changes and new developments in the last twenty years in the realm of higher education since the original theory was published has required that the order of the vectors be changed.   Furthermore, a few vectors also needed to be broadened to be more inclusive of the changes, which were not accounted for in the 1969 theory.   Some of the suggestions for changes are discussed in further detail in the following paragraph (Chickering and Reisser, 1993; Moore and Upcraft, 1990; Thomas and Chickering, 1984).

Adhering to the criticism set forth by Widdick, Parker, and Knefelkamp (1978) and other researchers with critiques that the original theory does not have enough information in the area of intellectual development, Chickering included the information with respect to intellectual competence in the vector of *Developing Competence* with specific focus on reflective thought. In addition, Chickering noted the importance of ensuring that students receive special sessions to

fine tune their skills in active listening, constructive feedback, and public speaking opportunities to achieve their interpersonal competence specifically for the workforce (Chickering and Reisser, 1993; Moore and Upcraft, 1990; Thomas and Chickering, 1984).

With an increase in incidents such as rape, sexual harassment, substance abuse, and suicide, the *Managing Emotions* vector needed to be broadened to address methods in dealing with these rapidly growing number of incidents. Further, the *Managing Emotions* vector needed to encompass cultural changes (Chickering and Reisser, 1993; Moore and Upcraft, 1990; Thomas and Chickering, 1984).

The *Developing Autonomy* vector was renamed name to *Moving Through Autonomy Toward Interdependence*. According to Chickering, its focus shifts dramatically from the ability to become emotionally and instrumentally independent from parents to the ability to focus on becoming more socially responsible, or more globally interdependent (Chickering and Reisser, 1993; Moore and Upcraft, 1990; Thomas and Chickering, 1984).

On the vector, *Freeing Interpersonal Relationships,* greater emphasis is now placed on developing tolerance and recognizing changes in social norms. In addition, with the change in global interdependence, recognizing and understanding behaviors of other cultural norms should be a major factor in achieving this vector. The sequencing of *Freeing Interpersonal Relationships* is changed from the fifth position to the fourth position, and is renamed *Developing Mature Interpersonal Relationships.* The reason it is placed before the *Establishing Identity* vector is to emphasize the importance of relationships in the formation of student identity (Chickering and Reisser, 1993; Moore and Upcraft, 1990; Thomas and Chickering, 1984).

Th*e Establishing Identity* vector was broadened to include recent developments in gender role, ethnicity, and sexual orientation.

The *Clarifying Purpose* vector has shifted focus from the "one life, one job" pattern to one of multiple careers. The revised version emphasizes the stress of current job situations which makes the integration of family, leisure, and work difficult (Chickering and Reisser, 1993; Moore and Upcraft, 1990; Thomas and Chickering, 1984).

The *Developing Integrity* vector includes works of Kohlberg (1964) and Perry (1970) which emphasized the interaction of intellectual development and value formation and the work

of Gilligan (1982) which recognized the differences between men and women.   Chickering also stated that this vector should include the development of a sense of social responsibility in addition to the personal responsibility advanced by the original constructs (Chickering and Reisser, 1993; Moore and Upcraft, 1990; Thomas and Chickering, 1984).

In addition to the changes noted above, Chickering also added two additional areas of focus.   One emphasizes the shift towards greater diversity in the college population.   It considers awareness of other cultures as well as life cycle research.   The second and more important area deals with ego development.   The new vector needs to be expanded to incorporate important aspects of more recent theoretical posture and describe how the different vectors interact with each other.   Chickering used the work of Loevinger (1976) to describe the vectors as an interacting set rather than as distinct entities.   The new vector will also stress the importance of the interaction and balance necessary between cognitive and affective development (Chickering and Reisser, 1993; Moore and Upcraft, 1990; Thomas and Chickering, 1984).

As this section demonstrates, while Chickering's theory is widely used by both researchers and practitioners in understanding college student development, it is still far from being complete in its treatment of the ever-changing nature of college students and the campus environment.   Further studies incorporating Chickering's suggestions are necessary to extend his theory to accurately represent the fast-paced changes in the college student population of this millennium.

<center>Students' Academic Developmental Process</center>

As stated previously, in order to focus on the students' psychosocial development, the institution must simultaneously retain its students.   Currently, retention is a constant challenge for postsecondary institutions; it is a social phenomenon that has been labeled a "departure puzzle"(Braxton, Sullivan, and Johnson, 1996).   It is troubling to many observers of higher education that despite greater social pressures for students to obtain college degrees, attrition rates remain surprisingly high.

Many researchers have attempted to define various factors which may have impacted student persistence.   Studies by Stage (1989), Brower (1992), and Peterson (1993) have supported the notion that psychosocial factors influence students' college's persistence.   In the

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study done by Stage (1989), she concluded that students' persistence may be impacted by students' motivational orientations based on Tinto's model.   To affirm his contention that students' psychosocial factors provide a much stronger prediction on student persistence than students' social and academic integration, Brower (1992) used a linear regression to compare Tinto's model to a life task persistence model (Braxton, Sullivan, and Johnson, 1996).

By doing a meta-analysis of previous studies done on the impact of college environment on minority students, Crosson (1988) noted the importance of having pre-college programs and services to explain the rational for attending college, campus life programs to encourage more involvement with other students and faculty members, and community involvement to give more support to minority students in degree achievement.   Tinto (1993) noted that growth in students' intellect, personality, motivation, and dispositional maturity also lead to persistence.

In Tinto's student interactional model, a student's development and beliefs are shaped within the institution.   However, external factors, such as family support and pre-college experience, which shape the students' perceptions of the institution, commitments to the institution, and preference for the institution are not significant in Tinto's model (Bean and Metzner, 1985).   According to Tierney (1992), the transition stage between family and college is not necessarily an abrupt transition.   Students need not forsake their cultural background; rather, college life should be "enforcing and incorporating what one has learned from one's extended family" (Tierney, 1992, p. 615).

Aside from noting the importance of the college environment, Crosson (1988) emphasized the importance of family and community support for minority students in achieving degree attainment.   By examining the effects of the social context and experiences of students after they had entered college, Anderson (1987) found that students' socioeconomic backgrounds played an important role in student persistence.   In a review of various studies conducted on student college choice, Hossler, Braxton, and Coopersmith (1989) also confirmed Anderson's (1987) finding on the positive correlation of family socioeconomic status with college persistence.   Both parental and peer support were also found to positively correlate with student persistence.   Bean and Vesper (1990) also recognized that external factors such as parental encouragement and support, parents' level of education, family socioeconomic status, and encouragement from high school counselors and teachers can play a prominent role in students'

decisions and attitudes toward persistence during college.

Weidman (1989) proposed a model to incorporate both psychological and social structural influences on student change. According to Weidman, integration into college is largely influenced by parental socialization and non-college reference groups, such as high school friends, employers, and community organizations. In turn, the socialization process during college shapes or maintains students' career choices, life-style preferences, aspirations, and values.

Although only a few student persistence studies have been mentioned here, many more theories abound due to a growing concern about student persistence in the postsecondary institutions of today. Since each theorist brings a unique voice to the subject, it is nearly impossible to incorporate every study into this research. Thus, this study will be limited to the usage of Tinto's theory of Student Departure. Tinto's theory was chosen by following the same rationale for choosing Chickering's theory of Psychosocial development. Namely, it is authored by one of the most prominent theorists in the field of student persistence or departure, and is the most sited and researched theory for studies regarding student departure.

CHAPTER III

METHODOLOGY

Sample and instruments of the study

The sample for this study was derived from a highly selective private southern research university.   Since institutional size was listed as one of the key influences on the development of Chickering's vectors (Chickering and Reisser, 1993), the institutional size for this study was held constant.   Using a longitudinal research design, the data in this study was collected at four different time points from a cohort of first-time freshmen who entered in the Fall 1994.   The initial data were collected in August 1994 at the end of the freshmen orientation and before the start of classes using the Student Information Form (SIF).

Since the university is a participant in the Cooperative Institutional Research Program sponsored by the American Council on Education, the SIF is administered to its incoming freshmen class annually.   The SIF includes student entry characteristics such as demographics. Of the original sample of 1,483 students, 1,102 (87.1%) students gave permission by supplying their social security numbers to the institution to release their information for research purposes.

With the cooperation of the Office of Residential Education, the second survey, the Student Development Task and Lifestyle Inventory, the third survey, the Early Collegiate Experiences Survey, and the fourth survey, the Freshman Year Survey, were administered to all freshmen who were living in the campus dormitories.

The Student Development Task and Lifestyle Inventory (SDTLI), based on Chickering's (1969) model of development, seeks to assess development along Chickering's vectors in the areas of Developing Autonomy, Clarifying Purpose, and Mature Interpersonal Relationships. The SDTLI was administered in late October 1994 midway through the fall semester after students had some time adjusting to college lifestyle and had began establishing relationships on campus.   A total of 906 surveys (61.7%) were returned.

The Early Collegiate Experienced Survey (ECES) includes items related to Tinto's theory of attrition/ retention as well as those related to Astin's theory of involvement.   The ECES was administered together with SDTLI in late October 1994.   A total of 958 surveys (65.2%) were returned.

The fourth survey, the Freshman Year Survey (FYS) was administered in March 1995. The Freshman Year Survey (based on, but not limited to, Pascarella and Terenzini's instrument, 1980) was developed from previous instruments used to assess Tinto's model of operational constructs such as academic and social integration (Braxton, Milem, Sullivan, & Berger, 1994). A total of 683 (46%) surveys were returned.

The final survey was administered in April 1998. It included the SDTLI as well as supplemental questions regarding the students' cumulative GPA and their Greek affiliation. Also, social integration items from the FYS were included. This survey was sent out to all seniors who had a post office box on campus at that time. Of the original 1,102 participating students from the Fall of 1994, only 872 students still had a PO Box on campus by the Spring of 1997. The remaing 230 had either dropped out, transferred, or graduated early. A PO Box was assigned to each undergraduate upon entering the institution, but subsequently removed when the student left. A total of 302 (34.6%) surveys were returned.

The data from all four collection points were merged into one data set by matching social security numbers. The result was a longitudinal panel study consisting of 102 students for whom we have data at each of the four time points. All the names and addresses of the students in this study have been deleted in order to maintain the confidentiality of the respondents. Even though the final student sample is only a small subset of the total student population, the students' background characteristics were statistically similar to that of the university's student population. The student sample consisted of sixty-four percent (64%) women, thirty-six percent (36%) men, fourty-nine percent (49%) of the students are from the south region, and fifty-eight percent (58%) of the students receiving financial aid. The institution statistic is fifty-one percent (51%) women, forty-nine percent (49%) men, forty-seven percent (47%) from the south region, and fifty-seven percent (57%) receive financial aid. Thus, other than the slight skew toward more women in the student sample, the final sample set is a close representative of the university's student population.

Reliability and Validity of SDTLI

Since SDTLI is the main instrument for this study, it is important to assess its reliability and validity. The reliability of the SDTLI has been shown by collecting test-retest data, as well

as demonstrating internal consistency.   Winston and Miller (1987) collected test-retest data which showed correlations clustered around .80, with all correlations significant at the p<0.1 level.   The Cronbach's Alpha, a test of internal consistency, has been run on both SDTLI administered in freshman year and senior year.   The results are compared with the results established by Winston and Miller, developers of SDTLI in Table 1.   The results show acceptable internal consistency, and coupled with the test-retest data, demonstrates the reliability of the SDTLI.

Table 1:   SDTLI Reliability Estimates

Task/ Subtask	Normative Sample Coefficient Alpha (n=1200)	Freshman Year Coefficient Alpha (n=369)	Senior Year Coefficient Alpha (n=102)
Establishing and Clarifying Purpose	**.90**	**.91**	**.77**
Educational Involvement	.75	.77	.67
Career Planning	.80	.80	.75
Lifestyle Planning	.62	.67	.65
Life Management	.69	.69	.57
Cultural Participation	.45	.50	.50
Developing Mature Interpersonal Relationships	**.76**	**.77**	**.67**
Peer Relationships	.75	.75	.68
Tolerance	.55	.58	.50
Emotional Autonomy	.55	.55	.52
Academic Autonomy	**.70**	**.70**	**.58**

Intimacy Scale	.70	.70	.60
Salubrious Lifestyle Scale	.71	.77	.67

The validity of SDTLI has been tested and confirmed by examining factor structures and intercorrelations, as well as correlation studies (Evans, Forney, and Guido-DiBrito, 1998). From the tests, Establishing and Clarifying Purpose and Mature Interpersonal Skills are completely independent of one another while Academic Autonomy is moderately correlated with both Establishing and Clarifying Purpose and Mature Interpersonal Skills (Winston, 1990). The SDTLI has also been found to correlate significantly with other related psychosocial development instruments (Evans, Forney, and Guido-DiBrito, 1998). Winston and Miller's approach is to establish the validity of the individual tasks, subtasks, and scales by finding significant correlation with conceptually related portions of other instruments (1987).

In estimating the validity of the Establishing and Clarifying Purpose Task and its subtasks, Winston and Miller (1987) demonstrate correlation with related portions of many tests. This includes Career Planning Scale (.70) from the Career Development Inventory, moderate correlation with selected scales from the Omnibus Personality Inventory (-.23 to .37), and moderate to high correlation with the Confidence Scale (.47), a low correlation with the Study Habits Scale (.29), a positive correlation with the Management of Time Scale from the Iowa Developing Autonomy Inventory (.44), and moderately high correlation with career-and-future focused attitudes from an inventory of attitudes and reports about behaviors collected along with the SDTLI (-.45 to .57).

The Developing Mature Interpersonal Relationships Task (MIR) and its subtasks are shown to have correlation with the Mines-Jenson Interpersonal Relationships Inventory (.37), which is based on Chickering's vectors. Winston and Miller (1987) also show that MIR had significant correlation with the Confidence Scale (.51) and Family Independence Scale (.44), several scales from the Iowa Developing Autonomy Inventory (including Emotional Independence-Peers), and nine scales from the Omnibus Personality Inventory (including Practical Outlook (-.47), Autonomy (.43), and Social Extroversion (.37).

Academic Autonomy is shown to be positively correlated with the Confidence Scale (.49), the Study Habits Scale (.49), the Management of Time Scale from the Iowa Developing

Autonomy Inventory (.50), and several scales from the Omnibus Personality Inventory: Anxiety Level (.52), Personal Integration (.48), and Altruism (.36).   The Salubrious Lifestyle Scale shows correlation Social Extroversion(.30), Personal Integration (.37), and Anxiety Level from the Omnibus Personality Inventory (.38).   The Salubrious Lifestyle Scale also shows correlation with the Confidence Scale (.38),   the Study Habits Scale (.33), and the Emotional Independence-Parents Scale (-.34) on the Iowa Developing Autonomy Inventory.   The Intimacy Scale correlates with the Interdependence Scale on the Iowa Developing Autonomy Inventory (.34), Anxiety Level (.38), Personal Integration (.37) and Social Extroversion (.30) from the Omnibus Personality Inventory, and the Confidence Scale(.25) from the Erwin Identity Scale (Winston and Miller, 1987).

<div align="center">Variables</div>

Five different sets of variables were included in this inquiry.   Two of these sets are constructs derived from Tinto's model, and one of these sets are constructs derived from Chickering's theory.   These five sets of constructs are: (1) student background characteristics, (2) Greek Involvement, (3) Social Integration, (4) the Student Developmental Task and Lifestyle Inventory from the freshman year, and (5) the Student Developmental Task and Lifestyle Inventory from the Senior Year.   The dependent variables in this study are scales derived from the SDTLI administered during the students' senior year.   Table 2 lists the details of the variables in each of the constructs.   Table 3 lists the means and standard deviations for these variables, and Table 4 lists the correlations among the variables used in the multiple regression analysis.   As shown on table 4, only one independent variable appears to be highly correlated with two other independent variables.   Career planning is highly correlated with Clarifying Purpose (0.867) and with Educational Involvement (0.772).   No other variables are highly correlated with one another.

Table2: Listing and Definition of Variables

BACKGROUND CHARACTERISTIC	
1. Race	Student racial/ethnic identity (nonwhite = 1, white =2) (SIF Item)
2. Gender (Sex)	Student gender (male = 1, female =2) (SIF Item)

3. Sat (SAT) Composite (SATCOMP)	Composite of SAT Verbal + SAT Math Score. (SIF Items)
4. Family Socio-economic Status (SES)	Composite of Parental Education + family income. Parental Education (Composite of Father's Education + Mother's Education, Grammar school or less = 1, Graduate degree = 8). Family income (Estimated Parental income, less than $6,000 =1, $200,000 or more = 14) (SIF Items) (Alpha estimate is 0.71 for this composite measure)
5. Cumulative GPA (CUMGPA)	Students cumulative GPA over 4 years of college (D or below = 1, A or higher = 4) (Supplemental Question item with the Final SDTLI)
GREEK INVOLVEMENT	
6. Greek	Greek affiliation (no = 1, yes =2) (Supplemental Question item with the Final SDTLI)
7. Greek Predisposition	Composite of 2 ECES items measuring importance of Greek affiliation (Disagree Strongly = 1, Agree Strongly = 4): (1) It is important to join a fraternity / sorority. (2) It is important to pledge the right fraternity/ sorority. (Alpha estimate is 0.93 for this composite measure)
INTEGRATION	
8. Social Integration	Composite of 9 FYS items indicating how well students agree with the following statements (Strongly disagree = 1, Strongly agree =4): (1) Interpersonal relationships yield positive influence on intellectual growth; (2) have developed close interpersonal relationships; (3) interpersonal relationships yield positive personal growth; (4) It is difficult to make friends – reverse scored; (5) few would listen and help if I have a problem – reverse scored; (6) most have values and attitudes which are difference from my own – reverse scored; (7) interact with faculty yield positive intellectual growth; (8) interact with faculty yield positive personal growth; (9) interact with faculty yield positive influence on career goals and aspirations. (Alpha estimate is 0.76 for this composite measure)
Variable from SDTLI administered Freshman year	
Establishing and Clarifying Purpose Task (PUR)	Composite of 66 SDTLI Items and is further defined by five Subtasks indicating students' response on their education, career, and lifestyle. (False = 1, True = 2) (1) Educational Involvement; (2) Career Planning; (3) Lifestyle Planning; (4) Life Management; (5) Cultural Participation. (Alpha estimate is 0.91 for this composite measure)
Educational Involvement Subtask (EDUINVOL)	Composite of 16 SDTLI Items indicating students' response on their educational goals and plans. (False = 1, True = 2) i.e. Declared academic major/ field of academic concentration. Developed a final plan to achieve educational goals. (Alpha estimate is 0.77 for this composite measure)
Career Planning Subtask (CAREER)	Composite of 19 SDTLI Items indicating students' response on their awareness of the world of work, and awareness of their own abilities and limitations. (False =1, True =2) i.e. Know where to find information regarding prospects for employment. Have practical experience in the prospective career field. (Alpha estimate is 0.80 for this composite measure)

Lifestyle Planning Subtask (LIFESTYL)	Composite of 11 SDTLI items indicating students' response to whether they have established a personal direction and orientation in one's life that takes into account personal, ethical, and religious values, future family plans, and vocational and educational objectives. (False = 1, True = 2) i.e. An objective observer can readily identify the ethical values that guide the student's life. Have identified the steps necessary to take in order to have the type desirable lifestyle after college. (Alpha estimate is 0.67 for this composite measure)
Life Management Subtask (LIFEMGT)	Composite of 16 SDTLI items indicating students' response to their ability to structure their lives and adapt to their environment in ways that allow them to satisfy daily needs and meet responsibilities without direction from others. (False =1, True = 2) i.e. Set aside time each day to deal with schoolwork and assignments. Initiated activity designed to help achieve something important in life. (Alpha estimate is 0.69 for this composite measure)
Cultural Participation Subtask (CULPART)	Composite of 6 SDTLI items indicating students' response to their involvement in a wide variety of cultural activities. i.e. Make time in schedule for hobbies. Regularly read novels or magazines in leisure time. (False =1, True =2) (Alpha estimate is 0.50 for this composite measure)
Developing Mature Interpersonal Relationships Task (MIR)	Composite of 30 SDTLI items and is further defined by three subtasks indicating their response to developing relationships with peers characterized by independence, frankness, and trust. (False =1, True =2) (1) Peer relationships; (2) Tolerance; (3) Emotional Autonomy. (Alpha estimate is 0.77 for this composite measure)
Peer relationships Subtask (PEERREL)	Composite of 13 SDTLI items indicating students' response to their interpersonal skills with peers. (False = 1, True = 2) i.e. Important to be liked by everyone. Important that others accept my point of view. (Alpha estimate is 0.75 for this composite measure)
Tolerance Subtask (TOLERAN)	Composite of 9 SDTLI items indicating students' response to their acceptance of those of different backgrounds, beliefs, cultures, races, lifestyles, and appearances. (False =1, True =2) i.e. Some topics should never be discussed in college classrooms. Prefer not to room with someone who is from a different culture or race. (Alpha estimate is 0.58 for this composite measure)
Emotional Autonomy Subtask (EMOAUTO)	Composite of 8 SDTLI items indicating students' response to their need for continuous reassurance and approval from others. (False = 1, True =2) i.e., Seldom express views that are different then others in the group. Usually more concerned about grades then understanding of the subject matter. (Alpha estimate is 0.55 for this composite measure)
Academic Autonomy task (ACAAUTO)	Composite of 10 SDTLI items indicating students' response to their capacity to deal well with ambiguity and to monitor and control their behavior in ways that allow them to attain personal goals and fulfill responsibilities. (False = 1, True =2) i.e. Have difficulty in courses when the instructor doesn't regularly check up on completion of assignments. Grades aren't as good because not asking help. (Alpha estimate is 0.70 for this composite measure)
Salubrious Lifestyle Scale (SALULIF)	Composite of 8 SDTLI items indicating students' response to their assessment to which a student's lifestyle is consistent with or promotes good health and wellness practices. (False =1, True = 2) i.e., Have good techniques to relieve stress. Have plenty of energy. Generally satisfied with own physical appearance. (Alpha estimate is 0.77 for this composite measure)

Intimacy Scale (INTIMAC)	Composite of 19 SDTLI items indicating students' response to whether they have established a relationship with another person based on high levels of mutual respect, honesty, and trust. (False=1, True=2) i.e., Have regular discussion with partner on how to spend time together. Difficult to see partner socialize with others. (Alpha estimate is 0.70 for this composite measure)

Variable from SDTLI administered Senior year (with different examples than freshman year)

Establishing and Clarifying Purpose Task (PUR2)	Composite of 66 follow-up SDTLI Items and is further defined by five Subtasks indicating students' response on their education, career, and lifestyle. (False = 1, True = 2) (1) Educational Involvement; (2) Career Planning; (3) Lifestyle Planning; (4) Life Management; (5) Cultural Participation. (Alpha estimate is 0.77 for this composite measure)
Educational Involvement Subtask (EDUINVO2)	Composite of 16 follow-up SDTLI Items indicating students' response on their educational goals and plans. (False = 1, True = 2) i.e., Have mature working skills one or more of the academic community. Have investigated the intellectual abilities and necessary academic background needed to be successful in the chosen academic major. (Alpha estimate is 0.67 for this composite measure)
Career Planning Subtask (CAREER2)	Composite of 19 follow-up SDTLI Items indicating students' response on their awareness of the world of work, and awareness of their own abilities and limitations. (False =1, True =2) i.e., Asked relatives, friends, or others to describe or discuss positions available in the fields in which they are working. Have identified some jobs within the selected career area which I know I would not like. (Alpha estimate is 0.75 for this composite measure)
Lifestyle Planning Subtask (LIFESTY2)	Composite of 11 follow-up SDTLI items indicating students' response to whether they have established a personal direction and orientation in one's life that takes into account personal, ethical, and religious values, future family plans, and vocational and educational objectives. (False = 1, True = 2) i.e., Have goals committed to accomplishing. Have followed through on nearly all the plans made. (Alpha estimate is 0.65 for this composite measure)
Life Management Subtask (LIFEMGT2)	Composite of 16 follow-up SDTLI items indicating students' response to their ability to structure their lives and adapt to their environment in ways that allow them to satisfy daily needs and meet responsibilities without direction from others. (False =1, True = 2) i.e., Have no hesitation in seeking for help when needed. Keep accurate records of spending. (Alpha estimate is 0.57 for this composite measure)
Cultural Participation Subtask (CULPART2)	Composite of 6 follow-up SDTLI items indicating students' response to their involvement in a wide variety of cultural activities. (False =1, True =2) i.e., Actively involved in two or more different organized activities in addition to academic studies. Have visited a museum or an art exhibit when not required for class. (Alpha estimate is 0.50 for this composite measure)
Developing Mature Interpersonal Relationships Task (MIR2)	Composite of 30 follow-up SDTLI items and is further defined by three subtasks indicating their response to developing relationships with peers characterized by independence, frankness, and trust. (False =1, True =2) (1) Peer relationships; (2) Tolerance; (3) Emotional Autonomy. (Alpha estimate is 0.67 for this composite measure)

Peer relationships Subtask (PEERREL2)	Composite of 13 follow-up SDTLI items indicating students' response to their interpersonal skills with peers. (False = 1, True = 2) i.e., Important to meet the standard set by friends. Hard to deal openly with college administrators and others in authority. (Alpha estimate is 0.68 for this composite measure)
Tolerance Subtask (TOLERAN2)	Composite of 9 follow-up SDTLI items indicating students' response to their acceptance of those of different backgrounds, beliefs, cultures, races, lifestyles, and appearances. (False =1, True =2) i.e., It is annoying to hear a language I do not understand. Avoid groups where I would be the minority. (Alpha estimate is 0.50 for this composite measure)
Emotional Autonomy Subtask (EMOAUTO2)	Composite of 8 follow-up SDTLI items indicating students' response to their need for continuous reassurance and approval from others. (False = 1, True =2) i.e., Seldom bounce ideas off other people in order to obtain their views of my thinking. Feel guilty when I don't obey my parents' wishes. (Alpha estimate is 0.52 for this composite measure)
Academic Autonomy task (ACAAUTO2)	Composite of 10 follow-up SDTLI items indicating students' response to their capacity to deal well with ambiguity and to monitor and control their behavior in ways that allow them to attain personal goals and fulfill responsibilities. (False = 1, True =2) i.e., Frequently do not perform as well in class as I could. It is hard to concentrate for long period of time. (Alpha estimate is 0.58 for this composite measure)
Salubrious Lifestyle Scale (SALULIF2)	Composite of 8 follow-up SDTLI items indicating students' response to their assessment of which a student's lifestyle is consistent with or promotes good health and wellness practices. (False =1, True = 2) i.e., Maintained appropriate weight for height and frame. Usually eat well-balanced meals. Make sure I get enough exercise to feel good. (Alpha estimate is 0.67 for this composite measure)
Intimacy Scale (INTIMAC2)	Composite of 19 follow-up SDTLI items indicating students' response to whether they have established a relationship with another person based on high levels of mutual respect, honesty, and trust. (False=1, True=2) i.e., Sometimes treat relationship as a game. Frequently feel as if partner's success as also my success. (Alpha estimate is 0.60 for this composite measure)

Table 3: Descriptive Statistics

	Mean	Std. Deviation	Variance
RACE	1.8627	.34582	.120
SEX	1.6373	.48317	.233
SATCOMP	1237.8925	118.22752	13977.746
SES	23.7086	3.82048	14.596
CUMGPA	3.1523	.60179	.362
GREEK	1.4216	.49625	.246
greek predisposition	5.9745	2.15603	4.648
Social Integration	26.3250	3.64190	13.263
establishing & clarifying purpose task	33.9314	11.45569	131.233
EDUINVOL	7.7157	3.16659	10.027
career planning	7.1275	4.44030	19.716
lifestyle planning	4.5588	2.09466	4.388
life management	9.9804	3.01803	9.109
cultural participation	3.2353	1.47706	2.182
developing mature interpersonal relationships	20.5392	4.46919	19.974
peer relationships	8.3725	2.47331	6.117
tolerance	6.4412	2.06610	4.269
emotional autonomy	4.5000	2.00371	4.015
academic autonomy	5.9608	2.83165	8.018
salubrious lifestyle	4.6078	2.16707	4.696
intimacy	11.5294	3.34991	11.222
establishing & clarifying purpose task 2	45.4412	8.77843	77.061
educational involvement 2	10.7647	2.82204	7.964
career planning 2	13.0098	3.32853	11.079
lifestyle planning 2	6.8824	2.27902	5.194
life management 2	10.7647	2.76533	7.647
cultural participation 2	4.0196	1.23465	1.524
developing mature interpersonal relationship2	19.3137	5.49704	30.217
peer relationships 2	8.9510	2.42257	5.869
tolerance 2	6.6078	1.73580	3.013
emotional autonomy 2	4.9804	1.81839	3.307
academic autonomy 2	6.2451	2.61918	6.860
salubrious lifestyle 2	5.1667	1.97049	3.883
intimacy 2	11.9608	3.98989	15.919

Table 4: Correlations

	Race	Sex	SATCOMP	SES	CUMPGA	Greek	GP	SI
Race	1.000	-----	----	-----	-----	-----	-----	-----
Sex	-0.064	1.000	----	-----	-----	-----	-----	-----
SATCOMP	0.122	-0.304	1.000	-----	-----	-----	-----	-----
SES	0.106	-0.159	0.140	1.000	-----	-----	-----	-----
CUMGPA	-0.133	-0.243	0.477	0.070	1.000	-----	-----	-----
Greek	0.167	0.272	-0.061	0.064	-0.154	1.000	-----	-----
GP	-0.058	-0.161	0.165	-0.130	0.102	-0.588	1.000	-----
SI	0.100	0.135	-0.030	0.047	-0.232	0.137	-0.133	1.000
PUR	0.018	-0.047	0.004	0.137	-0.134	-0.068	0.037	0.289
EDUINVOL	-0.045	-0.003	-0.111	0.154	-0.162	-0.036	-0.005	0.151
CAREER	-0.092	-0.107	-0.013	0.120	-0.090	-0.119	0.063	0.182
LIFESTYL	0.203	-0.160	0.053	0.055	0.039	0.162	0.005	0.185
LIFEMGT	0.130	0.029	0.059	0.042	-0.052	0.012	0.064	0.300
CULPART	0.180	-0.115	0.253	0.183	0.099	-0.042	0.120	0.201
MIR	0.112	0.027	-0.022	0.060	-0.087	-0.117	0.174	0.057
PEERREL	-0.044	0.073	-0.071	0.171	-0.036	-0.194	0.240	0.089
TOLERAN	0.044	0.172	-0.019	0.109	-0.135	-0.106	0.310	0.125
EMOAUTO	0.229	0.087	-0.067	0.068	-0.238	-0.075	0.197	0.000
ACAAUTO	0.075	0.105	0.046	0.134	0.229	-0.108	0.176	0.099
SALULIF	-0.112	0.052	-0.290	-0.008	-0.062	0.109	-0.217	-0.046
INTIMAC	0.055	0.181	-0.132	0.114	-0.113	0.150	0.016	0.037

	PUR	EDUINVO	CAREER	LIFESTY	LIFEMGT	CULPAR	MIR	PEERREL
Race	------	------	------	-----	------	----	------	------
Sex	------	------	------	-----	------	----	------	------
SATCOMP	------	------	------	------	------	-----	------	------
SES	------	------	------	-----	------	----	------	------
CUMGPA	------	------	------	-----	------	----	------	------
Greek	------	------	------	-----	------	----	------	------
GP	------	------	------	-----	------	----	------	------
SI	------	------	------	-----	------	----	------	------
PUR	1.000	------	------	-----	------	----	------	------
EDUINVOL	0.369	1.000	------	-----	------	----	------	------
CAREER	0.867	0.772	1.000	------	------	----	------	------
LIFESTYL	0.289	0.163	0.136	1.000	------	----	------	------
LIFEMGT	0.686	0.433	0.321	0.415	1.000	----	------	------
CULPART	0.608	0.482	0.430	0.175	0.430	1.000	------	------
MIR	0.103	0.100	0.043	0.190	0.087	0.176	1.000	------
PEERREL	0.011	0.020	0.006	0.156	0.039	0.014	0.491	1.000
TOLERAN	-0.095	-0.120	-0.161	0.174	0.076	0.095	0.437	0.535
EMOAUTO	-0.016	-0.029	-0.011	0.018	0.034	0.007	0.477	0.519
ACAAUTO	0.116	-0.002	-0.036	0.242	0.357	0.163	0.329	0.309
SALULIF	0.075	0.080	0.133	0.055	-0.030	-0.153	-0.070	-0.046
INTIMAC	0.188	0.137	0.151	0.213	0.151	0.129	0.171	0.318

	TOLERAN	EMOAUTO	ACAAUTO	SALULIF	INTIMAC
Race	-------	-------	-------	-------	-------
Sex	-------	-------	-------	-------	-------
SATCOMP	-------	-------	-------	-------	-------
SES	-------	-------	-------	-------	-------
CUMGPA	-------	-------	-------	-------	-------
Greek	-------	-------	-------	-------	-------
GP	-------	-------	-------	-------	-------
SI	------	-------	-------	-------	-------
PUR	-------	-------	-------	-------	-------
EDUINVOL	-------	-------	-------	-------	-------
CAREER	-------	-------	-------	-------	-------
LIFESTYL	-------	-------	-------	-------	-------
LIFEMGT	-------	-------	-------	-------	-------
CULPART	-------	-------	-------	-------	-------
MIR	-------	-------	-------	-------	-------
PEERREL	-------	-------	-------	-------	-------
TOLERAN		-------	-------	-------	-------
EMOAUTO	0.628	1.000	-------	-------	-------
ACAAUTO	0.467	0.346	1.000	-------	-------
SALULIF	-0.286	-0.196	-0.172	1.000	-------
INTIMAC	0.331	0.305	0.144	0.011	1.000

CHAPTER IV

ANALYSIS

Statistical Design

Multiple regression analysis was used to examine how students' social integration into college affects their psychosocial development.   In order to minimize Type I errors in measuring changes over time, it is important to control for certain variables.   Thirteen different regression models, three different tasks of student development including the subtasks of two of these tasks, and two student development scales were considered.   Namely, the Establishing and Clarifying Purpose Task with five subtasks: (1) Educational Involvement Subtask, (2) Career Planning Subtask, (3) Lifestyle Planning Subtask, (4) Life Management Subtask, (5) Cultural Participation; the Developing Mature Interpersonal Relationships Task with three subtasks: (1) Peer relationships Subtask, (2) Tolerance Subtask, (3) Emotional Autonomy Subtask;   the Academic Autonomy task; the Salubrious Lifestyle Scale; and the Intimacy Scale.

Each model regressed the subsequent SDTLI variables of student background characteristics, Greek involvement, social integration, and the first measurement (the SDTLI data collected in the students' freshmen year) of the independent variables.   Table 5 list the details of the regression results.

Table 5: Regression Results

	PUR2	EDUINVO2	CAREER2	LIFESTY2	LIFEMGT2
Race	0.107	0.055	0.106	-0.028	0.134
	2.713	*0.450*	*1.016*	*-0.182*	*1.072*
Sex	0.195*	0.217*	0.038	0.196	0.141
	3.536	*1.269*	*0.265*	*0.926*	*0.808*
SATCOMP	0.098	0.164	0.050	0.170	-0.052
	0.007	*0.004*	*0.001*	*0.003*	*-0.001*
SES	0.058	0.065	0.034	0.037	0.023
	0.134	*0.048*	*0.030*	*0.022*	*0.016*

	PUR2	EDUINVO2	CAREER2	LIFESTY2	LIFEMGT2
CUMGPA	0.192	0.176	0.089	-0.093	0.260*
	2.794	*0.824*	*0.492*	*-0.352*	*1.193*
Greek	0.291**	0.142	0.256*	0.100	0.278*
	5.139	*0.808*	*1.715*	*0.461*	*1.549*
GP	0.239*	0.168	0.148	0.132	0.272*
	0.975	*0.220*	*0.229*	*0.139*	*0.349*
SI	0.188*	0.138	0.192*	0.257**	0.085
	0.454	*0.107*	*0.175*	*0.161*	*0.065*
PUR	0.343***	---	---	---	---
	0.295	---	---	---	---
EDUINVOL	---	0.323***	---	---	---
	---	*0.288*	---	---	---

CAREER	---	---	0.263**	---	---
	---	---	*0.197*	---	---
	---	---		---	---
LIFESTYL	---	---	---	0.114	---
	---	---	---	*0.124*	---
	---	---	---		---
LIFEMGT	---	---	---	---	0.361***
	---	---	---	---	*0.331*
	---	---	---	---	
		---	---		---
R Square	0.359***	0.233**	0.183*	0.175*	0.309***
Adj R Square	0.296***	0.158**	0.103*	0.094*	0.241***

*$p \leq 0.05$.   **$p \leq 0.01$.   ***$p \leq 0.001$.

	CULPART2	MIR2	PEERREL2	TOLERAN2	EMOAUTO2
Race	0.011	0.290	0.130	-0.007	0.026
	0.038	*0.388*	*0.911*	*-0.036*	*0.135*
Sex	0.091	0.157	-0.002	0.031	-0.077
	0.232	*1.786*	*-0.012*	*0.110*	*-0.288*

	CULPART2	MIR2	PEERREL2	TOLERAN2	EMOAUTO2
SATCOMP	0.068	-0.037	-0.110	-0.083	0.206
	0.001	*-0.002*	*0.002*	*-0.001*	*0.003*
SES	0.134	0.182*	-0.018	-0.015	0.012
	0.043	*0.261*	*-0.011*	*0.007*	*0.006*
CUMGPA	0.096	-0.085	0.071	-0.004	-0.108
	0.198	*-0.778*	*0.285*	*-0.011*	*-0.326*
Greek	0.029	-0.018	-0.045	-0.186	0.112
	0.073	*-0.196*	*-0.219*	*-0.651*	*0.411*
GP	-0.051	0.273**	0.010	-0.052	0.066
	-0.029	*0.696*	*0.011*	*-0.042*	*0.056*
SI	0.027	0.045	0.047	0.043	-0.053
	0.093	*0.007*	*0.031*	*0.020*	*-0.026*
	---	---	---	---	---
CULPART	0.282*	---	---	---	---
	0.236	---	---	---	---
MIR	---	0.481***	---	---	---
	---	*0.591*	---	---	---
	---		---	---	---
PEERREL	---	---	0.358***	---	---
	---	---	*0.351*	---	---
	---	---		---	---
TOLERAN	---	---	---	0.448***	---
	---	---	---	*0.377*	---
	---	---	---		---
EMOAUTO	---	---	---	---	0.453***
	---	---	---	---	*0.411*
	---	---	---		
R Square	0.150	0.420***	0.160*	0.249***	0.280***
Adj R Square	0.067	0.363***	0.078*	0.175***	0.209***

*p≤0.05.　　**p≤0.01.　　***p≤0.001.

	ACAAUTO2	SALULIF2	INTIMAC2
Race	0.060	0.045	0.112
	0.457	*0.258*	*1.294*
Sex	-0.014	-0.107	0.096
	-0.008	*-0.436*	*0.793*
SATCOMP	-0.126	-0.040	-0.063
	-0.003	*-0.001*	*-0.021*
SES	0.088	0.136	-0.012
	0.006	*0.070*	*-0.013*
CUMGPA	0.364***	0.146	-0.059
	1.583	*0.477*	*-0.394*
Greek	0.293**	0.311*	0.175
	1.545	*1.235*	*1.405*
GP	0.207	0.162	-0.062
	0.252	*0.148*	*-0.115*
SI	0.158*	0.175*	0.067
	0.114	*0.095*	*0.074*
ACAAUTO	0.286**	---	---
	0.265	*---*	*---*

SALULIF	---	0.222*	---
	---	*0.201*	*---*

INTIMAC	---	---	0.039
	---	*---*	*0.046*
R Square	0.303***	0.171*	0.131
Adj R Square	0.235***	0.090*	0.046

*p≤0.05. **p≤0.01. ***p≤0.001.

Since this study was based Chickering's theory, the findings for this study will be presented using the three vectors of Chickering tested by the SDTLI: Moving through Autonomy toward Interdependence, Developing Mature Interpersonal Relationship, and Clarifying Purpose.

Moving through Autonomy toward Interdependence

Social Integration, students who have integrated with their peers and faculty, has a significant influence on the Academic Autonomy Task ($\beta=0.158^*$) and the Salubrious Lifestyle Scale ($\beta=0.175^*$).   Greek affiliation also shows a strong influence on the Academic Autonomy task ($\beta=0.293^{**}$), the Salubrious Lifestyle scale ($\beta=0.311^*$), and the Life Management skills ($\beta=0.278^*$).   Greek Predisposition, students who are favorable toward the Greek system and its characteristics, shows a significant influence on Life Management ($\beta=0.272^*$).   Students with higher cumulative GPA's, have a positive influence on their Life Management skills ($\beta=0.260^*$) and their Academic Autonomy ($\beta=0.364^{***}$).

Developing Mature Interpersonal Relationships

Even though students who are affiliated with a Greek organization do not show a significant difference in their interpersonal skills, students who are favorable to the Greek system have significantly better interpersonal skills ($\beta=0.273^{**}$).   A higher socio-economic background, SES, i.e. parents with higher educational degrees and parents with higher incomes, has a significant influence on developing mature interpersonal relationships ($\beta=0.182^*$).

Clarifying Purpose

Social Integration has a significant influence on the Establishing and Clarifying Purpose Task ($\beta=0.188^*$), and two out of its five subtasks: Career Planning ($\beta=0.192^*$) and Lifestyle Planning ($\beta=0.257^{**}$).   Affiliation with a Greek organization shows a strong influence on the Establishing and Clarifying Purpose Task   ($\beta=0.291^{**}$) and Career Planning ($\beta=0.256^*$). Greek Predisposition, shows a significant influence on Establishing and Clarifying Purpose Task ($\beta=0.239^*$).   SEX, in particular being female, has a significant influence on Establishing and Clarifying Purpose Task, ($\beta=0.195^*$) and its subtask, Educational Involvement ($\beta=0.217^*$).

All controlled SDTLI variables from the Freshman year, except for Lifestyle Planning and Intimacy, have a significant influence on their dependent SDTLI variables from the Senior year, (variables denoted with a 2 behind the symbol). The Establishing and Clarifying Purpose Task (PUR) has a significant influence on PUR2 (β=0.343***). The Educational Involvement Subtask (EDUINVOL) has a significant influence on EDUINVOL2(β=0.323***). The Career Planning Subtask (CAREER) has a significant influence on CAREER2 (β=0.263**). The Life Management Subtask (LIFEMGT) has a significant influence on LIFEMGT2 (β=0.361***). The Cultural Participation task (CULPART) has a significant influence on CULPART2 (β=0.282*). The Developing Interpersonal Skills task (MIR) has a significant influence on MIR2 (β=0.481***). The Peer Relationships Subtask (PEERREL) has a significant influence on PEERREL2 (β=0.358***). The Tolerance Subtask (TOLERAN) has a significant influence on TOLERAN2. The Emotional Autonomy Subtask (EMOAUTO) has a significant influence on EMOAUTO2 (β=0.453***). Both the Academic Autonomy task (ACAAUTO) and the Salubrious Lifestyle Scale (SALULIF) also have significant influences on their respective dependent variables. ACAAUTO has significant influence (β=0.286**) on ACAAUTO2. SALULIF has significant influence on SALULIF2 (β=0.222*).

Since the data is gathered from a fairly homogeneous group, (mean of 1.86 with whites =2 and nonwhites =1), the students' ethnic background, (RACE), does not have a significant influence on any of the student development tasks. Also, students who receive higher SAT composite scores have no significant influence on any of the student development tasks.

CHAPTER V

CONCLUSION

Results

Moving through Autonomy toward Interdependence

Social Integration shows a significant influence on the Academic Autonomy Task and the Salubrious Lifestyle Scale.   Students who are better integrated socially into the institution tend to deal better with ambiguity in life.   In addition, they are skilled at meeting schedules and study plans, and they perform well with respect to their abilities.   Perhaps this explains why social integration can have a significant influence on academic autonomy but not on educational involvement; students who perform well on educational involvement tend to have very defined goals and purposes, with nothing ambiguous**.**   Confirming the study done by Erwin and Love (1989), being involved in Greek life also assists students in structuring their lives in such a way that they can manage their time efficiently and meet their demands and responsibilities realistically.

Similar to Social Integration, Greek affiliation also has a significant influence on both the Academic Autonomy Task and the Salubrious Lifestyle Scale.   Being Greek affiliated assists students in dealing with life's ambiguities proficiently and in performing to their academic potential consistently.   Greek affiliation also encourages students to have good health and wellness practices, and has a significant influence in assisting students in understanding their own abilities and limitations.   For students who perceive Greek affiliation to be important (Greek predisposition), they also scored better on the Life Management subtask.   Finally, as one would expect, students' cumulative GPA does have a significant influence on students' academic autonomy.   Students who have high GPAs tends to deal well with ambiguity, plan their study and schedules effectively, and manage their time efficiently to meet daily demands.

Developing Mature Interpersonal Relationships

Campus organizations and participation in extracurricular activities were expected to

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have significant influences on developing Mature Interpersonal Relationships (Hood, 1984; Riahinejad and Hood, 1984).   However, such social integration did not show any significant influence on Mature Interpersonal Relationships or any of its subtasks.   Similar to Martin's results (2000), collegiate experience did not support the development of   Mature Interpersonal Relationships.   This may have been true because students gain new friendships and adapt to their new surroundings generally within their first few weeks in college.   On the other hand, it is possible that there are simply not enough opportrites beyond the students freshman year for higher-order challenges to produce sufficient growth (Hagedorn, Pacarella, Edison, Braxton, Nora, & Terenzini, 1999).   Since the freshmen year SDTLI was not administered until October of the freshman year, most students had already adapted to their new environment and had formed new friendships by that time.

        Greek predisposition has a significant influence on the Developing Mature Interpersonal Relationships Task while neither Social Integration nor Greek affiliation has any significant influence.   The students' socio-economic background also has a significant influence on the students' interpersonal skills.   Students who came from high socio-economic backgrounds tended to be more respectful of individual differences.

        An interesting finding which emerged from this study is that students who perceive Greek affiliation to be important and students with high socio-economic backgrounds are the only students who have significant appreciation for individual differences among friends.   One explanation is that students who perceive Greek affiliation to be important also perceive other organizations to be important.   Thus, they are more involved in various organizations and have better appreciation for differences in people.   Also, students who have high socio-economic backgrounds generally have more opportunity to travel and participate in various activities. When opportunities are present for one to socialize with various types of people, then one generally becomes more appreciative of their differences (Byer, 1998).

        Another explanation for why Greek Predisposition and SES have significant influence on Mature Interpersonal Relationships while Social Integration and Greek affiliation have no significant influence is that both Greek Predisposition and SES are pre-existing conditions.   In other words, these students came into campus with previously attained appreciation for differences.   Both Social Integration and Greek affiliation however, are variables which came

into play only after students had entered the institution. If the institution is relatively diversified, then the students may have greater opportunity to meet various types of people. The institution for this study however, was very homogeneous, and Greek organizations tended to socialize only within themselves. Therefore, the lack of opportunities for exposure to diversity in the student population resulted in students' having less appreciation for differences.

Clarifying Purpose

Controlling for the students' Establishing and Clarifying Purpose Task score which was taken upon entry into the institution, students who were more integrated into the institution socially, were more likely to have a higher score on the Establishing and Clarifying Purpose Task at the end of their senior year. Breaking the Establishing and Clarifying Purpose Task into subtasks, Social Integration only had a significant influence on career planning and lifestyle planning. Students who were more socially integrated had a better understanding of themselves and their surroundings; thus, they had more knowledge about the types of careers they could pursue. Incidentally, students who were better integrated into the institution also appeared to have better direction in their lives and future lifestyles. Again, this study confirmed the study done by Martin (2000) in that students who actively participated in clubs and organizations had a clearer purpose in life.

Students who were affiliated with Greek Organizations also showed significantly better scores on the Establishing and Clarifying Purpose Task and its subtask, Career Planning. In other words, Greek affiliation appears to advantageously assist students in establishing a sense of purpose for themselves. Through the opportunities it provides for college involvement, membership in Greek organizations also assists students in becoming active learners. Greek affiliation also had a significant influence in assisting students in understanding their own abilities and limitations. By coming to understand what they can and cannot accomplish, the students develop a better sense of what type of occupation to pursue. Students who perceived Greek affiliation to be important, i.e. those with a high Greek Predisposition, also scored better on Establishing and Clarifying Purpose.

<center>Discussion</center>

In this study, the results of Social Integration and Greek Affiliation seemed to run parallel.   This is unsurprising, since Greek Affiliation can be considered a possible factor in Social Integration. At the same time, only Greek Predisposition appears to have a significant influence on Mature Interpersonal Relationship.   It seems surprising that Social Integration had no influence on Mature Interpersonal Relationship when previous studies had shown that intimate relationships, campus organizations, and extracurricular activities had all appeared to have significant influence on developing Mature Interpersonal Relationships (Erwin and Love, 1989; Hood, 1984; and Riahinejad and Hood, 1984).   However, it is possible that there were simply not enough opportunities beyond the students' freshman year for higher-order challenges to produce sufficient growth (Hagedorn, Pacarella, Edison, Braxton, Nora, & Terenzini, 1999). Another way to view it is that although social integration occurs mainly in the first year of college, it is insufficient in and of itself to further the development of Mature Interpersonal Relationships (Hagedorn, Pacarella, Edison, Braxton, Nora, & Terenzini, 1999).   As Rogers (1980) and Stage (1991) have suggested, further growth in psychosocial development may require higher-order challenges, such as study abroad, or greater support for students throughout their college careers.

Based on the framework that Social Integration refers to congruence with the institution or a subculture of the institution, Greek Predisposition may also be considered an important precedent to Social Integration.   Greek Predisposition refers to more than just the perception of Greek Organizations, such as how important is it to join a fraternity or sorority or how important is it to join the right fraternity or sorority.   Greek Predisposition also refers to the students' need for social affiliation with particular groups.   From this perspective, it follows that a student's feeling regarding a particular group may cause the student to become either more involved or less involved with that group.   This may apply to either the institution as a whole, or to one of the student subcultures within the institution.

Tinto also stated that congruence and contact need not be perfect between the student and the institution as a whole, but that a student only needs to find at minimum a compatible subgroup with which to establish 'fit' (1993).   If one becomes more involved with a compatible subgroup, then one's mature interpersonal relationships may be enhanced (Hood, 1984 and

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Riahinejad and Hood, 1984).

However, Martin (2000) stated that collegiate experience has no influence on or support for Mature Interpersonal Relationships.   This present study further confirmed that social integration, in and of itself, provides insufficient opportunity for challenges which support growth in Mature Interpersonal Relationship.   The result on Greek Predisposition further enhances Weidman's model that parental socialization and non-college reference groups, such as high school friends, employers, and community organizations, largely influence integration into college.   In turn, the socialization process during college shapes or maintains the students' career choices, life-style preferences, aspirations, and values (Weidman, 1989).

The result in Greek Predisposition reflects the need for social affiliation within the institution; and further, the various organizations and subcultures determine how well a student integrates into the institution.   In other words, Mature Interpersonal Relationship is already developed prior to entering the institution unless there are other extraordinary influences not anticipated prior to joining the institution.   For instance, students may not plan to join organizations such as the ROTC or the Greek system when entering the institution, but may find themselves being pulled into these organizations by friends, and hence changing their perspectives.   Similarly, an extraordinary experience such as spending a year abroad may allow a student to gain a different point of view.   Consistent with this result, it appears that common collegiate experience as it is perceived by students prior to joining the institution, has no influence on Mature Interpersonal Relationship (Martin, 2000).

Since the data for Social Integration in this study was gathered during the students' freshmen year, the results of this study are in agreement with previous studies.   If the students feel they are an integral part of the organization, then they are more likely become actively involved.   If the students become involved, then they will be in congruence with the organization.   If the students are in congruence with the organization, then the students may be shaped by the beliefs of the organization.   The same logic applies to faculty members and friends.   Thus, this study also confirms that faculty and student interaction, clubs, and organizations all have a significant influence on Clarifying Purpose (Martin, 2000 and Thieke, 1994).

There are several limitations to this study.   First, since the data was drawn from a single highly selective Research I institution, it cannot be generalized to other institutions.   Second, the data for this study is skewed because the institution was highly homogeneous in comparison with other institutions.   Third, the instrument used, the SDTLI, tests only three out of seven of Chickering's vectors.   Nevertheless, the SDTLI has been extremely reliable in test-retest correlations.   Winston and Miller (1987) and Winston (1990) confirmed after several test-retest periods that range from two to twenty weeks that the SDTLI is stable over time having Pearson's Correlations ranged from .70 to .87.   Since the test has been shown to be so reliable, there is little room to make significant deviations.   However, since this study is a longitudinal study conducted over a period of four years, the test-retest limitation may not be applicable.   Fourth, the freshman year SDTLI score was gathered in late October of the freshman year.   Since most students had integrated into their new surroundings during the first few weeks of entrance, the data for the freshman SDTLI would have been more reliable for this study if it had been gathered during students' orientation week.   Fifth, since this study is based on data gathered only in the students' freshman and senior years, and not in their sophomore and junior years, there is no data on students who did not remain in the institution.   Did they transfer, drop out, or graduate early?

The study may have been further enhanced if it also included a sophomore year survey, a junior year survey, and a senior year survey.   Thus, further details could have been gathered on the changes, or lack thereof, of the students' perceptions of the institution throughout their college careers.   Also, if data were gathered in all four years, then there would have been more information on whether the students had participated in any extraordinary activities (such as ROTC or study abroad) and how involved the students were in different organizations they participated.   Sixth, no other information exists on the degree of involvement students have in their Greek organizations.   The only information available was whether the students were Greek affiliated or not.   It would have been beneficial to have further details on the degree of involvement in the Greek organizations and how the students felt about their Greek Organizations.   Finally, since all the data was gathered from students who had persisted, a comparison cannot be made of the effects of the students' integration on psychosocial development between "persisters" and "non-persisters."   It is strongly recommended to have

future studies which gather data from all four years of college in order to obtain less skewed data on the influence of social integration.

<center>Implications</center>

Despite its limitations, this study contains some important implications for research on students' psychosocial development.   The findings from this study confirm that social integration does indeed have a significant influence on students' psychosocial development. Students who are more socially integrated, are also more self-sufficient and are more aware of their goals in life.   In addition, this study showed that the students' need for social affiliation with the social systems of an institution has a significant influence on their Mature Interpersonal Skills.   Therefore, it is important for an institution to foster social integration in order to have an impact on students' psychosocial development.

In that respect, it is important for the administrators to reach out to new incoming students and perhaps attempt to break their negative preconceptions and make them aware of the possibilities within the institution.   This may be accomplished by inviting new incoming students to a weekend at the institution which both incoming and current student participates; or by holding picnics for fellow new incoming students and alumni near their respective hometowns.   Thus, the incoming student not only gets a chance to socialize with fellow incoming freshmen, but also gets to meet upperclassmen (individually or through another campus organization) who will give them some exposure to the student life and the subcultures of the campus.   This initial exposure should be further developed during the student's initial time on campus (i.e. during orientation or very early in the school year).   Students should be exposed to as many diverse communities within the institution as possible, and organizations should have the opportunity to make their presence and distinct characteristics known.   This may be accomplished by simply setting aside time and facilities for the various clubs and organizations to set up tables to advertise themselves and hopefully recruit new members.

Furthermore, the institution should seek to bring as many subcultures under its umbrella as possible.   Since students may find themselves more in congruence with a particular organization rather than with the institution as a whole, it is in the institution's interest to align the broader beliefs and values of the individual organizations with those of the institution as a

whole, while allowing the individual organizations to preserve their distinctions.   For instance, the institution may attempt to get organizations involved in such campus activities such as fundraising or community service, and in turn, the organizations would receive support from the institution with things such as funding, use of facilities, or participation in student government. Thus,. incoming freshmen may find themselves drawn into these communities, and through these communities, become integrated with the institution as a whole.

It is also important for the institution to assure that every freshman feels included in the freshmen orientation week.   Instead of separate freshmen housing, freshmen housing with upperclassmen may be provided.   If the freshmen feel supported by the upperclassmen, who may give suggestions on what classes to take, and on great places to socialize, then they would be more likely to feel congruent with the institution.   Greater interaction with the larger student community, not just with fellow freshmen, may lead to greater social integration.

Likewise, attention should be paid to the students' academic objectives and student-faculty interaction.   Academic life is separate from social life, but the two are related; one can lead to the other, and likewise the lack of one can have negative effects on the other as well (Tinto 1993).   It is good to upperclassmen involved; it is also good to have different departments host an annual informative party or open house at the beginning of the school year. This way, students can have out of class interaction with faculty members and have their questions regarding the departments answered by faculty members.   It is also good to have some upperclassmen and graduate students from the department to be available to answer questions. This provides an opportunity for freshmen to decide the major they wish to pursue as well as a better chance to get to know both their faculty members and upperclassmen better.   If the students have a good perception of the interaction, then they are more likely to have a better sense of self and what they would like to pursue.

This study also has important implications for the Greek systems in higher education. Greek affiliation also shows a significant influence on developing self-sufficiency, career goals, and time usage, but it does not show any significant influence on appreciating differences. Clearly, Greek affiliation renders many positive results for students but further studies need to be pursued before any policy can be made regarding Greek organizations.   However, it is important for college educators to provide opportunities or culture for Greek affiliated and non-Greek

affiliated students to interact in order to diversify ones appreciation for differences.

Conclusion

Since the freshman year has been established as the building block for all subsequent changes, how can higher education professionals work to facilitate positive changes in students throughout their college years?   Miller (1982) noted that the primary responsibility of student affairs programs is to assist students in their personal growth, development, and education. This may be accomplished by providing opportunities congruent to the level of development that the students are currently experiencing and managing the environment they are exposed to.   As this study has shown, students who are socially integrated into the institution show a sense of self-sufficiency in meeting responsibilities and career goals.   In addition, students who are Greek affiliated show an even stronger sense of self-sufficiency.   Since this study demonstrates the importance of Greek values and culture, educators should carefully examine the values and culture of their campus Greek systems.   Furthermore, this study also concludes that involvement occurs not just with one's peer group or organization but with different types of people and that this is helpful in developing mature interpersonal relationships.   In other words, students who are involved in a variety of different activities tend to show more appreciation for different cultures and values.   In order to effect positive change in students, educators, including student affairs professionals, must have a comprehensive understanding of developmental theory as well as knowledge of the means of encouraging developmental change.   Hopefully, this study will provide pertinent information for educators to facilitate "optimal" development in their students.

Appendix A:
COMPARISON BETWEEN CHICKERING'S 1969 AND 1993 MODEL

Chickering's 1969 Model	Definition
1. Developing Competence	Competence involves the development of intellectual competence, physical and manual skills, and social and interpersonal competence. It involves also a sense of competence, defined as the confidence one has in his/her ability to cope with what comes to achieve successfully what he/she sets out to do.
2. Managing Emotions	Become aware of feelings and to trust them more, to recognize that they provide information relevant to contemplated behavior or to decisions about future plans. As a larger range of feelings are fully expressed, new and more useful patters of expression and control can be achieved.
3. Developing Autonomy	Mature independence requires both emotional and instrumental independence and the recognition of one's interdependencies. To be emotionally independent is to be free of continual and pressing needs for reassurance or approval. Instrumental independence has two components, the ability to carry on activities and to cope with problems without seeking help, and the ability to carry on activities and to cope with problems without seeking help, and the ability to be mobile in relation to one's needs. Interdependence is recognizing that loving and being loved are complementary, or that one cannot receive benefits of a social structure without contributing to it.
4. Establishing Identity	Identity is confidence in one's ability to maintain inner sameness and continuity and involves clarification of conceptions concerning physical needs, characteristics, and personal appearances, and clarification of sexual identification, and of sex appropriate roles and behaviors.
5. Freeing Inter-Personal Relationships	Relationships should shift toward greater trust, independence, and individuality and should become less anxious, less defensive, less burdened by inappropriate past reactions, more friendly, more spontaneous, more warm, and more respectful. Developing tolerance for a wide range of persons is a significant aspect of this task

6. Clarifying Purpose	Development of Purpose requires formulating plans and priorities that integrate a vocational and recreational interest, vocational plans, and life style considerations.
7. Developing Integrity	The clarification of a personally valid set of beliefs that have some internal consistency and provide a guide for behavior. Such development involves the humanizing of values describes the shift from a literal belief in the absoluteness of rules to a more relative view. Personalizing values occurs as values are first examined and then selected by an individual. The development of congruence is the achievement of behavior consistent with the personalized values held.

Chickering's 1993 Model

Chickering's 1993 Model	Revision
1. Developing Competence	Broadened to include information with respect to intellectual development
2. Managing Emotions	Broadened to address methods dealing with incidents such as rape, sexual harassment, substance abuse, and suicide.
3. Moving Through Autonomy Toward Interdependence	Name changed from *Developing Autonomy,* shift from focusing independence from parents to becoming more socially responsible, or more global interdependence.
4. Developing Mature Interpersonal Relationships	1. Name is changed from *Freeing Interpersonal Relationships.* 2. Switched position with *Establishing Identity.*
5. Establishing Identity	Broadened to include recent developments such as gender role, ethnic, and sexual orientations.
6. Clarifying Purpose	Shifts its focus from "one life, one job" pattern to one of multiple careers. More emphasis is placed on the stress of current job situations which makes the integration of family, leisure, and work difficult.
7. Developing Integrity	Broadened to address the interaction of intellectual development and value formation, to recognize the difference the men and women, and to include the development of a sense of social responsibility in addition to the personal responsibility advanced by the original theory.

* The three shaded vectors are the only three assessed by SDTLI

Appendix B: TASK, SUBTASK, AND SCALE DESCRIPTIONS

These definitions are direct quotes from the Student Developmental Task and Lifestyle Inventory Manuel

Establishing and Clarifying Purpose Task (PUR)	Students who have high achievement on this task (a) have well-defined and thoroughly explored educational goals and plans and are active, self-directed learners; (b) have synthesized knowledge about themselves and the world of work into appropriate career plans, both making an emotional commitment and taking steps now to allow realizations of career goals; (c) have established a personal direction in their lives and made plans for their futures that take into account personal, ethical, and religious values, future family plans, and vocational and educational objectives; (d) exhibit a wide range of cultural interests and are active participants in traditional cultural events; and (e) structure their lives and manipulate their environment in ways that allow them to satisfy daily needs, meet personal responsibilities, manage personal finances appropriately, and satisfactorily meet academic demands.
Educational Involvement Subtask (EI)	Students who have accomplished this subtask have well-defined educational goals and plans, are knowledgeable about available resources, and are actively involved in the academic life of the college. After careful investigation and self-analysis, they have selected areas of academic concentration for which they are intellectually suited and academically qualified, and with which they are temperamentally compatible. They are not passive learners; they take initiatives to insure that they are obtaining relevant and appropriate educational experiences through activity such as initiating personal study projects, attending non-required lectures and programs, and making regular contact with academic advisors and faculty and staff members.
Career Planning Subtask (CP)	An awareness of the world of work, an accurate understanding of one's abilities and limitations, a knowledge of requirements for various occupations, and an understanding of the emotional and educational demands of different kinds of jobs are evidence of accomplishment of this subtask. Students who have achieved this subtask have synthesized knowledge about themselves and the world of work into a rational order which enables them to make a commitment to chosen career field and formulate specific vocational plans. They have taken the initial steps necessary to prepare themselves through both educational and practical experiences for eventual employment, and have taken steps necessary for beginning a job search.

Lifestyle Planning Subtask (LP)	Achievement of this subtask includes establishing a personal direction and orientation in one's life that takes into account personal, ethical, and religious values, future family plans, and vocational and educational objectives. Plans need not be highly specific nor committed to an absolute, but must be of sufficient clarity to permit identification of appropriate present steps and reflect the establishment of well-thought-out long-range goals. Students who have high achievement on this subtask are self-aware, can objectively analyze their own behaviors, attitudes, and beliefs, and exhibit the capacity to follow through on personal plans and commitments. They can specify how current activities relate to the realization of the kind of future they envision for themselves.
Life Management Subtask (LM)	Students who have completed this subtask demonstrate an ability to structure their lives and to manipulate their environment in ways that allow them to satisfy daily needs and meet responsibilities without extensive direction or support from others. They are able to manage their time and other aspects of their lives in ways that allow them to meet academic demands, satisfy personal needs, fulfill community and family responsibilities; to establish and follow through on realistic plans; to manage their financial affairs satisfactorily; and to solve most problems as they arise. They are involved in and contributors to the community in which they live, they are independent, goal-directed, resourceful, and self-sufficient persons who also are able to recognize when they need assistance and who seek and accept help when the need arises.
Cultural Participation Subtask (CUP)	Students who have accomplished this subtask are actively involved in a wide variety of activities, including traditional cultural events such as attending plays, ballets, museums, art exhibits, and classical music concerts. Their leisure time is spent productively in such activities as reading, pursuit of hobbies, and voluntary participation in student organizations. They exhibit a wide array of cultural interests and a developed sense of aesthetic appreciation.
Developing Mature Interpersonal Relationships Task (MIR)	Students who have high achievement on this task have developed relationships with peers characterized by independence, frankness, and trust; they appreciate individual differences among friends and acquaintances and feel reduced pressure to conform to group norms or to conceal disagreements. In relationships with persons from different cultures, races, and backgrounds they exhibit high levels of respect and acceptance

	and have a general attitude of openness to and appreciation for differences. Student high on this task are free from the need for continuous reassurance and approval from others and have minimal dependence on parents for direction in decision making.
Peer relationships Subtask (PR)	Having accomplished this subtask, students describe their relationships with peers as shifting toward greater trust, independence, frankness, and individuality and as feeling less need to conform to the standards of friends or to conceal shortcomings or disagreements. Students can distinguish between friends and acquaintances and have both kinds of relationships. Friendships survive the development of differences in activities, beliefs, and values, and reflect an appreciation for individual differences. Relationships with peers and authority figures are open and honest; disagreements are resolved or simply accepted.
Tolerance Subtask (TOL)	Respect for an acceptance of those of different backgrounds, beliefs, cultures, races, lifestyles, and appearances describe students who have high achievement on this subtask. They respond to people as individuals; do not employ racial, sexual, or cultural stereotypes; have an openness to new or unconventional ideas and beliefs; and are appreciative of individual differences. Tolerance involves an openness to and acceptance of differences and does not mean the development of screening devices to shield one from the values and ideas of those with different backgrounds, lifestyles, or belief systems. Student high in tolerance do not shy from or reject contact with those with different ethnic, racial, or cultural heritage or with different religious beliefs, political views, or lifestyles.
Emotional Autonomy Subtask (EA)	Students who have accomplished this task are free from the need for continuous reassurance and approval from others. Trusting their own ideas and feelings, they have the self-assurance to be confident decision-makers and to voice dissenting opinions in groups. They have confidence in their abilities and are prudent risk-takers. They have resolved many of the conflicts inherent in the child-parent relationships to the extent that reliance on parents for direction is minimal.
Academic Autonomy task *(AA)*	Students who have accomplished this task have the capacity to deal well with ambiguity and to monitor and control their behavior in ways that allow them to attain personal goals and fulfill responsibilities. high scores devise and execute effective study plans and schedules; perform academically at levels with

	which they are satisfied are consistent with their abilities; are self-disciplined; and require minimal amounts of direction from others. While they are independent learners, they are also willing to seek academic help when needed.
Salubrious Lifestyle Scale (SL)	This scale measures the degree to which a student's lifestyle is consistent with or promotes good health and wellness practices. A high score includes eating well-balanced, nutritious meals, maintaining an appropriate body weight, planning for and getting sufficient amounts of sleep and physical exercise, use of effective stress reduction techniques, and positive evaluation of one's physical appearance.
Intimacy Scale (INT)	Students high on this scale have established a relationship with another person based on high levels of mutual respect, honesty, and trust. Intimacy involves they uninhibited expression of feelings, values, attitudes, wants, and needs to one's partner. partners can be themselves, without feeling the need to create a facade, and do not "play games" with each other. This kind of intimacy is not possessive and includes the private sharing of ideas and nonverbal forms of communication. Hopes, fears, aspirations, doubts, and other feelings and thoughts are freely expressed through private conversations another shared experiences. Intimacy involves the capacity to love and care for another and to be loved and cared for by another, as well as testing one's ability and desire to make long-term commitments. (INT must be considered as *experimental scale* at present)
Response Bias Scale (RB)	A high score on this scale indicates the student is attempting to project an inflated or unrealistically favorable self portrait. (The purpose of this scale is to identify students who either did not play careful attention when completing the SDTLI or who were attempting to "fake good" when completing it. The RB Scale should not be viewed as a personality measure or as an indicator of pathology.

REFERENCES

Anderson, K. L. (1987).   Persistence, student background and integration/commitment: Variation by definition of persistence and institutional type.   Paper presented at the Annual Meeting of the Association for the Study of Higher Education, Baltimore, MD.

Astin, A. (1977).   *Four Critical Years.*   San Francisco: Jossey-Bass.

Astin, A. (1984).   Student Involvement: A Developmental Theory for Higher Education.   *Journal of College Student Personnel,*   25: 297-308.

Astin, A. (1991).   What Really Matters in General Education: Provocative Findings from a Nationl Study of Student Outcome.   Key Note Address, Conference of the Association of General and Liberal Studies.

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

Bean, J. P., & Metzner, B. S. (1985).   A Conceptual Model of Nontraditional Undergraduate Student Attrition.   Review of Educational Research, Vol. 55, 485-508, 520-539.

Bean, J.P., & Vesper, N. (1990).   Qualitative approaches to grounding theory in data: Using Lisrel to develop a local model and theory of student attrition.   *Annual Meeting of the American Educational Research,*   Boston, MA.

Bloom, B. S. (1953). Thought Processes in Lectures and Discussion.   *Journal of General Education, 7:* 160-169.

Braxton, J.M. (1995).   Faculty Classroom Behaviors and Their Influence on Academic and Social Integration Student Departure Decisions.   Paper presented at the Annual Meeting of the Association for the Study of Higher Education, Orlando, FL.

Braxton, J.M., Lien, L. A. (2000) The Viability of Academic Integration as a Central Construct in Tinto's Interactionalist Theory of College Student Departure.   In J. Braxton (Ed.), *Reworking the Departure Puzzle.*   Nashville: Vanderbilt University Press.

Braxton, J.M., Milem, J. F., Sullivan, A. V., & Berger, J. M. (1994)   Freshmen Year Survey.

Braxton, J.M., Sullivan, A.V., & Johnson, R.M. (1997). Appraising Tinto's Theory of College Student Departure.   In J. Smart (Ed.), *Higher education: Handbook of theory and research.* New York: Agathon.

Brower, A. (1992).   The "second half" of student integration.   *Journal of Higher Education* 63(4): 441-462.

Brown, R. (1972). Student Development in Tomorrow's Higher Education: A Return to the Academy. Washington, D.C.: American Personnel and Guidance Association.

Burt, J. M. & Halpin, G. (1998). African American Identity Development: A Review of the Literature. Paper presented at the Annual Meeting of the Mid-South Educational Research Association.

Byer, J. L. (1998). Fraternity members' Perceptions of how Involvement in a Fraternity and Involvement in Student Government has Influenced their College Experience. Educational Resource Information Center: ED 421 958.

Chickering, A. (1969). *Education and Identity*. San Francisco: Jossey Bass.

Chickering, A. W. (1974). The Impact of Various College Environments on Personality Development. *Journal of the American College Health Association, 23:* 82-94.

Chickering, A. (1981). *The Modern American College: Responding to the New Realities of Diverse Students and a Changing Society.* San Francisco: Jossey Bass.

Chickering, A. & Reisser, L. (1993) *Education and Identity*. Second Edition. San Francisco: Jossey Bass.

Crosson, P. H. (1988). Four-Year College and University Environments for Minority Degree Achievement. *The Review of Higher Education. 11(4):* 365-382.

Dollar, R. J. (1966). Student Characteristic and Choice of Housing. *Journal of College Student Personne,.* 7:147-150.

Endo, J. & Harpel, R. (1982). Effects of Student-Faculty Interactions on Students Educational Outcomes. *Research in Higher Education,* 16(2): 115-138.

Erikson, E. (1959). Identity and the Life Cycle. *Psychological Issues Monograph* 1(1): 1-171.

Erwin, T. & Kelly, K. (1985). Changes in Students Self Confidence in College. *Journal of College Student Personnel,* 26: 395-400.

Erwin, T. & Love, W. (1989). Selected Environmental Factors in Student Development. *NASPA Journal,* 17: 19-24.

Evans, N. J. (1996). Theories of Student Development. In S. R. Komives, D. B. Woodard., Jr. (Eds.), *Student Services: A Handbook for the Profession.* San Francisco: Jossey Bass.

Evans, N.J., Forney, D. S., & Guido-DiBrito, F. (1998). *Student Development in College.* San Francisco: Jossey-Bass.

Fellowman, K. A. & Newcomer, T. M. (1969). *The Impact of College on Students.* San Francisco: Jossey Bass.

Gilligan, C. (1982). *In a Different Voice.* Cambridge, MA: Harvard University Press.

Greeley, A. T. & Tinsley, H. E. A. (1988). Autonomy and Intimacy Development in College Students: Sex Differences and Predictors. *Journal of College Student Development.* 29: 512-520.

Hagedorn, L. S., Pascarella, E. T., Edison, M., Braxton, J. M., Nora, A. & Terenzini, P. T. (1999). Institutional Context and the Development of Critical Thinking: A Research Note. *The Review of Higher Education.* 22(3): 265-285.

Heath, D. (1968) *Growing Up in College.* San Francisco: Jossey Bass.

Hood, A. (1984) Student Development: Does Participation Affect Growth? *Association of College Unions International Bulletin,* 52:16-19.

Hoosier, Braxton, & Coppersmith, (1989) Understanding Student College Choice. in Ed., J. C. Smart., Higher Education: Handbook of Theory and Research, Vol. V.

Josselson, R. (1987). *Finding herself: Pathways to identity development in women.* San Francisco: Jossey Bass.

Kohlberg, L. (1964). Stage and Sequence: The Cognitive Developmental Approach to Socialization. in Ed., D. Goslin., Handbook of Socialization and Research. Chicago: Rand McNally.

Kuh, G. D.& Love, P.G.. (2000) A Cultural Perspective on Student Departure. In J. Braxton (Ed.), *Reworking the Departure Puzzle.* Nashville: Vanderbilt University Press.

Kuh, G. D., Pascarella, E. T., and Wechsler, H. (1996) The Questionable Value of Fraternities. *Chronicle of Higher Education*, *43* (4), A68.

Kuh, F. S. , Schuh, J.H., & Whitt, E. J. (1991). *Involving Colleges*. San Francisco: Jossey-Bass.

Kuh, G. D., Vesper, N., Connolly, M. R., & Pace, C. R. (1997). *College Student Experiences Questionnaire: Revised norms for the 3rd edition, 1997.* Bloomington: Indiana University Center for Postsecondary Research and Planning.

Loevinger, J. (1976). *Ego Development: Conceptions and Theories.* San Francisco: Jossey-Bass.

McGeoch, J. A., & Irion, A. L. (1952). *The Psychology of Human Learning.* White Plains, N.Y.: Longman.

Marcia, J. (1966).   Determination and Construct Validity of Ego Identity Status.   *Journal of Personality and Social Psychology.*   3: 551-558.

Martin, L. M. (2000).   The Relationship of College Experiences to Psychosocial Outcomes in Students.   *Journal of College Student Development.*   41(3): 292-301.

Meyer, G. (1936). An Experimental Study of the Old and New Types of Examinations.   II: Method of Study.   *Journal of Educational Psychology, 26:* 30-40.

Miller, T. (1982). Student Development Assessment: A Rationale.   *New Directions for Student Services.*   20:5-15.

Moore, L. & Upcraft, L. (1990).   Theory in Student Affairs. *New Directions in Student Services,* 51: 3-25.

Moos, R. (1979).   *Evaluating Educational Environments.*   San Francisco: Jossey-Bass.

Newcomer T., Brown, D., Kulick, J., Reimer, D., and Revelle, W. (1970).   Self Selection and Change.   In J. Gaff (Ed.), *The Cluster College*. San Francisco: Jossey Bass.

Palmer, P. J. (1987).   Community, Conflict, and Ways of Knowing.   *Change, 19(5):*   20-25.

Pascarella, E. T., Edison, M., Whitt, E. J., Nora, A., Hagedorn, L. S., and Terenzini, P. T. (1996) College Effects of Greek Affiliation During the First Year of College.   *NASPA Journal,* 33 (4), 242-259.

Pascarella, E. T., & Terenzini, P. T. (1976).   Informal Interaction with Faculty and Freshmen Ratings of Academic and Non_Academic Experiences of College.   *Journal of Education Research,*   70: 35-41.

Pascarella, E. T., & Terenzini, P. T. (1978). Student-Faculty Informal Relationships and Freshman Year Educational Outcomes.   *Journal of Educational Research,* 71: 183-189.

Pascarella, E. T., & Terenzini, P. T. (1991). *How College Affects Students*.   San Francisco: Jossey-Bass.

Perry, W. (1970).   *Forms of Intellectual and Ethical Development in the College Years: A Scheme.*   New York: Holt.

Peterson, S. L. (1993). Career decision-making self-efficacy and institutional integration of underprepared college students.   *Research in Higher Education* 34(6): 659-675.

Pike, G. R. (2000).   The influence of fraternity or sorority membership on students' college experience and cognitive development.   *Research in Higher Education* 41(1):   111-139.

Riahinejad, A. & Hood, A. (1984). The Development of Interpersonal Relationships in College. *Journal of College Student Personnel,* 25: 498-502.

Rogers, R. (1980).   Themes underlying student development.   In D. Creamer (Ed.), *Student development in higher education: Theories, practices, and future directions* (pp. 10-95). Cincinnati, OH: ACPA Media.

Sanford, N. (1966).   *Self and Society: Social Changes and Individual Development.*   New York: Atherton Press.

Schenkel, S., & Marcia, J.E. (1972).   Attitudes toward premarital intercourse in determining ego identity status in college women.   *Journal of Personality, 40,*   472-482.

Stage, F. K. (1989).   Motivation, academic and social integration, and the early dropout.   American Education Research Journal 25(3):   385-402.

Stage, F. K. (1991).   Common elements of theory: A framework for college student development.   *Journal of College Student Development, 32*(1), 56-61.

Stakenas, R. (1972).   Student-Faculty Contact and Attitude Change: Results of an Experiemental Program for College Freshmen. In K. Fellowman (ed.), *College and Student: Selected Readings in the Social Psychology of Higher Education.* New York: Pergamon Press.

Straub, C. A. & Rodgers, R. F. (1986).   An Exploration of Chickering's Theory and Women's Development.   *Journal of College Student Personnel.*   27: 216-224.

Taub, D. J. (1995). Relationship of Selected Factors to Traditional-Age Undergraduate Women's Development of Autonomy.   *Journal of College Student Development.*   36(2): 141-151.

Taub, D. J. (1997).   Autonomy and Parental Attachment in Traditional-Age Undergraduate Women.   *Journal of College Student Development.*   38(6): 645-654.

Terenzini, P.T. & Wright, T.M. (1987).   Influence on Student's Academic Growth During Four Years of College.   *Research in Higher Education,* 26(2): 161-179.

Terry, P. W. (1933).   How Students Review for Objective and Essay Tests.   *Elementary School Journal, 33:* 592-603.

Thieke, W. (1994a).   A Model of Developmental Change in Freshman Students: Confirming Chickering's theory of Student Development.   Dissertation submitted in partial fulfillment of the requirement for the degree of Doctor of Philosophy in Higher Education in the Graduate School of Syracuse University.

Thieke, W. (1994b). Developmental Change in Freshman Students: Validating Chickering's

Theory of Student Development.   ASHE Annual Meeting Paper.

Thomas, R., & Chickering, A. (1984).   Education and Identity Revisited.   *The Journal of College Student Personnel,*   25: 392-399.

Tierney, W. G. (1992).   An Anthropological Analysis of Student Participation in College.   *Journal of Higher Education.*   (63)6: 603-618.

Tinto, V. (1993). Leaving College: rethinking the causes and cures of student attrition, second edition.   Chicago: University of Chicago Press.

Weidman, J. (1989).   Undergraduate Socialization: A conceptual approach.   In J. Smart (Ed.), *Higher education: Handbook of theory and research*   (Vol. 5).   New York: Agathon.

Widdick, C., Parker, C., & Knefelkamp, L. (1978).   Arthur Chickerings Vectors of Development.   In L. Kneffelkamp, C. Widdick, and G. Parker (Eds).   *Applying new Developmental Findings*.   New Directions for Student Services, 4:13-23.

Widdick, C., Kneffelkamp, L., & Parker, C. (1985).   Student Development.   In U. Delworth and G. Hanson (Eds.).   *Student Services: A Handbook for the Profession.*   San Francisco: Jossey Bass.

Winston, R. B. (1990).   The Student Developmental Task and Lifestyle Inventory: An approach to measuring students' psychosocial Development.   *Journal of College Student Development,* 31, 108-120.

Wilson, R.C., Gaff, J., Dienst, E., Wood, L. & Bavry, J. (1975).   College Professors and Their Impact on Students.   New York: Wiley.

Winston, R. B., & Miller, T.K. (1987). The Student Development Task and Lifestyle Inventory Manuel.   Athens, Georgia: Student Development Associates.

Winston, R. B., & Saunders, S. A. (1987).   The Greek Experience: Friend or Foe of Student Development.   *New Directions for Student Services,* 40: 5-20.