

CHAPTER 1

INTRODUCTION TO THE RESEARCH

Scope of the Study

A significant problem that continues to confront our nation's higher education institutions is the number of students who enter college but leave prior to achieving their goal of degree completion. Throughout the last four decades, numerous researchers have dedicated their professional careers to understanding the conditions and reasons why students discontinue their academic studies. Theories have been articulated, variables considered, and attrition prediction models tested. From this extensive work, evidence has emerged that begins to tell the complex story of why students voluntarily withdraw from college before graduation day.

According to Tinto (1975), early studies approached the problem of student attrition by isolating variables and studying their association to student dropout. Researchers failed to address the multiple characteristics of student leaving behavior and the complex interactions between the individual and the institution. Another weakness of past studies was the lack of distinction among varying forms of departure. Tinto argued that academic dismissal and voluntary withdrawal were separate phenomenon demanding different methodological approaches. Due to these limitations, results from empirical studies varied greatly, often contradicting previous findings, and no solid body of evidence could be established. The direction of retention research changed however, when Tinto (1975) introduced a theoretical model of individual departure.

Tinto's (1975) theoretical model of dropout behavior was rooted in sociological, economic and educational theory. The model is descriptive and addresses the conditions that contribute to early withdrawal from the institution. According to Tinto, individuals begin their college careers with personal characteristics and dispositions. These characteristics influence

students' commitments to educational goals and to the institution itself. As the student perceives experiences within the collegiate environment, these commitments become modified. Students judge how experiences contribute to the benefits of college enrollment versus the costs. When encounters are perceived as positive, the student becomes integrated into the academic and social systems of the college and commitment levels are enhanced. Alternatively if experiences are negatively perceived and integration fails to occur, commitments become weakened creating the conditions for early withdrawal.

Of all the theoretical models developed, Tinto's has led to the most widespread body of research (Pascarella, Duby & Iverson, 1983). Braxton, Bray and Berger (2000) stated, "Tinto's interactionist theory of college student departure has near-paradigmatic stature with more than 400 citations to the theory" (p. 215). A solid body of foundational literature (Baumgart & Johnstone, 1977; Getzlaf, Sedlacek, Kearney & Blackwell, 1984; Munro, 1981; Pascarella, Duby & Iverson, 1983; Pascarella, Duby, Miller & Rasher, 1981; Pascarella & Terenzini, 1976; 1979; 1980; Terenzini & Pascarella, 1976; 1977) addressed the predictive validity of Tinto's conceptual framework. This series of studies yielded significant evidence to support the effectiveness of Tinto's model.

One of the most intriguing findings resulting from this foundational research was evidence linking student perceptions of faculty to their decision to either re-enroll or depart from the institution (Pascarella & Terenzini, 1979, 1980; Terenzini & Pascarella, 1976; 1977). Additional researchers (Endo & Harpel 1981; Nordquist, 1993; Schreiner, 1988; Stith, 1994) further investigated the dynamics of student-faculty interaction and explored how these specifically influence student enrollment decisions. Findings from this body of research revealed that students often view faculty as frontline representatives of the college and thus form a general opinion of the institution based on their perceptions of faculty (Schreiner, 1988). Faculty members are judged on their professional competence within the classroom (Stith, 1994) as well as in their demonstrated concern for students as individuals (Nordquist, 1988). Toy (1985) added that students regard faculty as respected adults or even surrogate parents with whom they can discuss significant issues.

Faculty, however are not the sole representatives on campus who engage in significant contact with college students. In addition to faculty, Noel (1985) identified academic advisors as a source of institutional enrichment, contributing to the vitality of the campus environment.

Academic advisors influence the student decision-making process by assisting with interpreting curricular requirements, discussing academic options and identifying and cultivating student talent (Noel, 1985).

Recent research examining critical student concerns recognized the significance of the academic advising function in the lives of students (Hendel & Tomsic, 2000). It has been established in the literature that academic advisors provide formal educational guidance within a broader context of students' interests, values, and career choices (Fago, 1995; Frost, 1991; Wade & Yoder, 1995). Advisors are responsible for connecting students to other essential services on campus (King, 1993), and offer students interpersonal interaction with a caring adult (Wade & Yoder, 1995). When assessing advisors, students base their judgments primarily on the advisors' interpersonal qualities including helpfulness, accessibility, and levels of demonstrated concern and personal interest for the individual (Beasley-Fielstein, 1986). These criteria are comparable to measures students employ when formulating their perceptions of faculty, a key variable proven to differentiate returning from departing students (Nordquist, 1993; Pascarella & Terenzini, 1979; 1980).

Several higher education researchers examined the association between academic advising and student retention (Creamer, 1980; Habley, 1991; Miller, 1985; Patrick, Furlow & Donovan, 1988). These studies established a clear link between effective academic advising and improved retention rates. Researchers (Creamer, 1980; Habley, 1991) addressed Tinto's (1975) concepts in relation to academic advising, and suggested methods for advisors to facilitate the integration process for students. Additional studies (Getzlaf, Sedlacek, Kearney & Blackwell, 1984; Grosset, 1991; Nordquist, 1993) assessed the predictive validity of Tinto's model and incorporated students' perceptions of academic advising as measures of student integration. These references, however, were peripheral and used in conjunction with perceptions of faculty and other campus staff. Findings linking student advising experiences with subsequent enrollment behavior were revealed, yet clear associations could not be established given that academic advising was not examined as a separate variable. A significant gap remains concerning the association between students' perceptions of academic advising and future enrollment behavior.

Statement of the Problem

The purpose of this study was to examine student perceptions of academic advising and determine the relationship between academic advising and student persistence.

Research Questions

This study was designed to answer the following research questions:

RQ1: What are students' perceptions of academic advising?

RQ2: Do perceptions of academic advising differ based on the type of advising delivery system (faculty advisor, professional advisor, or peer advisor)?

RQ3: Do departing and returning students differ in their perceptions of academic advising?

RQ4: Do measures of Tinto's conceptual framework contribute to the prediction of students' future enrollment behavior?

RQ5: When added to measures of Tinto's conceptual framework, do perceptions of academic advising contribute to the prediction of students' future enrollment behavior?

RQ6: Do perceptions of academic advising function as measures of academic and/or social integration?

Conceptual Framework

Vincent Tinto (1975) introduced a theoretical model of student retention that addressed the complex interplay between students and the institutional environment. Tinto's theory of student departure is unique in its longitudinal approach. It asserts that a student's decision to remain or depart from an institution results from a series of interchanges between that student and members of the college environment.

Tinto (1975) identified student integration into the academic and social domains of the campus community as the critical piece of the attrition/retention puzzle. Integration occurs through experiences between the student and other members of the institution. The level of student integration predicts whether the student will either persist until graduation or voluntarily depart prior to obtaining a degree.

Many researchers have validated the explanatory power of Tinto's model by operationalizing the key components of the theory and predicting enrollment decisions (Baumgart & Johnstone, 1977; Getzlaf, Sedlacek, Kearney & Blackwell, 1984; Pascarella & Chapman, 1983; Pascarella & Terenzini, 1979; 1980; Terenzini & Pascarella, 1976; 1977). This body of research confirmed the connection between student integration and enrollment decisions.

Researchers identified student-faculty interaction as a primary source of the student integration process. Interaction with faculty and the perceived levels of faculty care and concern for students, were recognized as the strongest contributors to the identification of returning and departing students (Pascarella & Terenzini, 1980). Noel identified academic advisors as the second group of higher education professionals central to a successful campus retention effort. The advising-retention link has been studied previously, but a gap in the literature remains concerning the influence of advisors within the context of the student integration process.

This study employed a methodological construction of Tinto's model similar to the original foundational studies validating Tinto's model. Students' perceptions of academic advising were added as a new variable set in order to assess their contribution to the identification of returning and departing student groups. Finally, variables measuring student opinion of academic advising were compared to measures of student integration. This served as a method for assessing academic advising as a valid measure of the student integration process.

Significance of the Study

Despite the extensive body of research addressing the problem of student attrition, Seidman (1996) stated that little improvement has been made in retention rates among higher education institutions. The American College Testing Center (ACT) for the Enhancement of Educational Practices (2002) confirmed Seidman's assessment by reporting an actual decrease in retention rates from 1994 to 2002. ACT data from 2002 demonstrated that 74 percent of first-year students returned for their second year of college.

A high attrition rate translates into negative consequences for the individual, the institution and society. The New Millennium Project on Higher Education Costs, Pricing and Productivity (1998) was formed as a national initiative to study higher education fiscal policy. In

a publication addressing the value of higher education, the authors revealed the many public and private benefits of college attendance.

For the individual, a college degree renders a 73 percent higher salary than a high school diploma according to the statistics compiled by the New Millennium Project. There are additional benefits as well including greater access to healthcare, improved working conditions, a higher level of financial assets, and personal and professional mobility (The New Millennium Project on Higher Education Costs, Pricing and Productivity, 1998). Capelli and Iannozzi (1993) concurred with these findings and reported that the current rate of return on educational costs is 10 to 11 percent, and one additional year of education translates to increased wages and enhanced employment skills.

College attendance also impacts individuals beyond the economic benefits. Pascarella and Terenzini (1991) presented a synthesis of research findings demonstrating various dimensions in which students are changed by their collegiate experiences. These changes occur in the areas of cognitive growth, psychosocial maturity and moral development. Individuals develop intellectual reasoning, writing and speaking skills. An appreciation for the arts and humanities is cultivated, and cultural and ethnic diversity better understood by college graduates. Pascarella and Terenzini noted that a consistent and integrated pattern of change occurs in these areas rather than change in one area at the expense of another.

Publicly, an educated society contributes significantly to a tax base, compared to that of a non-educated society. College attainment has proven integral to the nation's economic growth and overall productivity, increasing workforce flexibility and decreasing reliance on governmental assistance (The New Millennium Project on Higher Education Costs, Pricing and Productivity, 1998).

At the institutional level, the most evident impact of student attrition is lost tuition revenue, since tuition and fees often represent 25 percent or more of the state appropriations for public colleges and universities" (Gaither, 1992, p.245). For institutions, losing students also affects enrollment counts and decreases the state contribution based on FTE-driven formulas. Additionally, graduate rates are now considered a primary factor in institutional rankings (Reisberg, 1999). If a college fails to graduate its students, it creates negative public perceptions, which in turn translate into lower attendance rates, less tuition and full time equivalency (FTE)

based revenue. These issues have proven troubling to higher education administrators and recent developments in funding trends raise the stakes even higher.

Funding for public colleges and universities is undergoing significant changes with performance budgeting, and degree attainment is emerging as a key measure. A survey sponsored by the Public Higher Education Program at the Rockefeller Institute of Government (1998), reported that 21 states at that time used and several states anticipated using, performance budgeting to link resource allocation to institutional performance. This report reflected the growing trend that requires institutions of higher education to demonstrate accountability to the governing bodies making the funding decisions. The authors wrote, "Performance budgeting tilts the budget question from what states should do for their campuses to what campuses should do for their states" (Burke & Serban, 1998, p.2).

In summary, the proven benefits associated with degree attainment, and recent changes in funding for higher education demonstrate the significant loss of potential associated with student attrition. Individuals lose the opportunity for greater economic prosperity and enhanced maturity and life skills. A less educated citizenry serves to suppress the country's tax base, and diminish economic growth and productivity. Institutions lose funding, which limits potential for optimal instruction, research and service. In order to prevent future loss it is imperative that researchers within higher education continue to investigate the reasons that contribute to student departure, and explore institutional strategies that have proven successful in improving retention rates.

Effective academic advising is considered a significant process within an enriching educational environment (Noel, 1985), yet its influence has not been isolated and included within a retention model. If indeed it can be proven that perceptions of advising influence persistence decisions, this information holds great potential for guiding institutional policy and resource allocation in efforts to improve institutional graduation rates.

Limitations

The data to be utilized in this study has been gathered from Florida State University (FSU), a four-year, Research I, Tier II, traditional public institution. The Undergraduate FSU Satisfaction Inventory was the instrument employed for the study and was developed by a team of institutional researchers intending to capture student opinion of unique aspects of the

institutional experience. This instrument was modified from a general, previously validated instrument that had been used by a team of higher education consultants employed by the institution to address retention issues. The Undergraduate FSU Satisfaction Inventory addressed student perceptions of the institution through the use of specific institutional titles (i.e. Liberal Studies instead of general education requirements).

The advising structure at Florida State University is also specific to this institution, employing both a centralized and decentralized system. Other colleges and universities employ unique advising systems that may differ from the structure in place at this institution.

Despite the use of specific institutional titles or the unique advising structure on a college campus, the framework for this investigation has been developed to investigate a potential relationship between student perceptions of academic advising and future enrollment decisions. The findings may be limited in their application to institutions differing in institutional type or advising delivery systems. The information gained from this investigation however, may be used to guide the development of future investigations examining the link between the institutional climate and student enrollment decisions.

Definitions of Terms

Voluntary Student Withdrawal: Consistent with retention studies investigating student withdrawal (Pascarella & Terenzini, 1979), this study will be an examination of voluntary student withdrawal. Participants who were academically dismissed from the institution were excluded from the sample.

Freshman Retention/Attrition: Based on evidence from exploratory studies on retention and attrition, researchers (Baumgart & Johnstone, 1977; Pascarella & Terenzini, 1979; 1980; USA Group Noel Levitz, 1997) identified the end of the freshman year as the period when attrition is heaviest. Consistent with previous research, this investigation focused on freshman attrition. For this study, freshmen were defined as First Time in College (FTIC) students who entered the institution either in the Summer or Fall 2000 and 2001 semesters with fewer than twelve semester hours completed following high school graduation. This definition includes students entering the institution with credits earned through academic programs including Advanced Placement, International Baccalaureate, and dual enrollment with community colleges.

Returning students were participants who returned to the institution for the sophomore year. Departing students were those who did not continue their enrollment into the Fall 2001 and 2002 semesters.

Advising Delivery System: Crockett (1985) identified several academic advising delivery systems employed by colleges and universities. These include faculty advising, professional advising, peer advising and paraprofessional advising. Within the instrument proposed for this study, students were asked to identify their primary advisor from among six options (faculty member, professional advisor, peer advisor, other university resources, non-university resources and I do not have an advisor). This investigation will examine the responses from students who identified their primary advisor as a faculty advisor, professional advisor or peer advisor.

Academic Integration: Academic Integration is the level that one shares in the value system of the educational collective. Tinto (1975) presented two forms of integration, structural and normative. Structural integration signifies the extrinsic representation of academic achievement reflected in students' grade performance. Normative integration represents an internal judgement of students' intellectual development and was the form utilized in this research study.

Social Integration: Social integration is the level that a student perceives their sense of fit or membership within the social communities of the institution.

CHAPTER 2

REVIEW OF LITERATURE

Overview

Within the review of literature a synthesis of current research will be presented addressing the link between academic advising and student retention. This chapter will 1) provide an overview of Tinto's theoretical model of student departure, 2) describe how this model has been operationalized by various researchers and present findings from the body of foundational studies, 3) discuss pertinent findings concerning dynamics within the student-faculty relationship and its link to persistence decisions, 4) establish the function of the professional academic advisor within the institution and student perceptions of this position, and 5) critically review previous studies that have specifically addressed academic advising and student retention.

Tinto's Theory of Individual Departure

Interactional Causes of Student Withdrawal

Tinto's (1975) model of student departure has laid a foundation for retention research in higher education, dramatically altering the methodological approach taken by researchers in the field. Tinto's (1975) theory of student departure is unique in its longitudinal approach. It captures the complex processes between the individual and the institution, which can result in early departure. Tinto based his theory on the extensive body of literature that identified key factors associated with student persistence. Pantages and Creedon's (1978) review of the literature offered the contextual setting for Tinto's conceptual framework and provided a comprehensive examination of factors comprising the dimensions of the model.

Previous models of departure grew out of psychological, environmental, economic or organizational theory, yet according to Tinto (1993) these yielded few relevant findings and failed to address the dynamic forces contributing to individual departure decisions. In a meta-analysis of retention literature, Pantages and Creedon (1978) identified similar limitations of the research. Many studies focused on one or two factors thought to cause student attrition. Other investigations examined student characteristics of departing students without any comparison groups. A final weakness reported in the research prior to Tinto's model was the lack of discrimination among different leaving behavior (Pantages and Creedon, 1978). For example, prior to Tinto's model (1975), departing students were often stereotyped and classified solely as "dropouts". Tinto observed,

...dropouts have been frequently portrayed as having a distinct personality profile or as lacking in a particularly important attribute needed for college completion. As a consequence we have been given the mistaken view that student dropouts are different or deviant from the rest of the student population. Such stereotypes are reinforced by a language, a way of talking about student departure which labels individuals as failures for not having completed their course of study in an institution of higher education. In this regard the label dropout is one of the more frequently misused terms in our lexicon of educational descriptors. (Tinto, 1993, p. 3)

Tinto separated the causes and roots of student departure into three critical areas: 1) individual characteristics prior to entering college, 2) the experiences of the individual upon entry into the college community, and 3) the effect of external forces that interfere with the college experience. Within each area are specific factors or experiences that contribute significantly to student departure.

Tinto identified two individual characteristics central to the issue of student departure: 'intention' and 'commitment' (Tinto, 1993, p. 37). Intention is the individual's primary goal that directs all related educational activity, and according to Tinto, the higher the educational goal, the more likely the student will persist. Commitment is the individual's level of motivation that provides the drive to get through a degree program. Tinto wrote, "These not only help set the boundaries of individual attainment but also serve to color the character of individual experiences within the institution following entry" (Tinto, 1993, p. 37).

At the institutional level, Tinto (1993) identified four clusters of occurrences or circumstances that effect the student's decision to either depart or remain at the institution. These clusters were identified as adjustment, difficulty, incongruence, and isolation and describe how the individual interacts within the institutional environment.

The first experience, adjustment, describes the process of transitioning from one world to another. A student is compelled to separate from the familiar world of family and friends to an entirely new set of social and intellectual demands. A student's intentions, commitments, and level of resiliency will contribute to the success of this initial adjustment. Tinto wrote, "Lest we forget, most new students are teenagers who have precious little chance to live on their own and attend the many challenging issues of adult life" (Tinto, 1993, p.47). Thus for most, the adjustment period is personally challenging, but for some, it is so difficult that it leads to departure from the institution.

The second experience, difficulty (Tinto, 1993), is the student's inability to meet minimal academic standards and is attributed to less than 25% of student withdrawals. Tinto credited this difficulty to a lack of necessary academic skills and cited several research studies that identified a deficiency in high school preparation, inconsistent grading policies among different high schools and a growing trend of individual unpreparedness as reasons for student difficulty (Tinto, 1993). Tinto also pointed out that contrary to widely held assumptions within the academic community that this experience applies only to disadvantaged or minority students, difficulty affects students from all backgrounds and ages.

The third experience, incongruence, "refers in general to the mismatch or lack of fit between the needs, interests, and preferences of the individual and those of the institution" (Tinto, 1993, p. 50). The student does not feel he or she fits into the new institutional community. Within the educational realm of the institution, incongruence manifests itself in either academic under-qualification or over-qualification; the student finds the coursework to be either undemanding or exceedingly challenging. Within the social realm, incongruence is reflected primarily in peer relationships when students feel that their own values and interests do not match those of other students. Tinto addressed the need for colleges and universities to present a clear picture of the institutional climate as a method for better matching prospective students with specific institutional offerings.

The final institutional experience, isolation, is the experience of individuals who cannot establish themselves into a social network and thus lack the “personal bonds that are the basis for membership in the communities of the institution” (Tinto, 1993, p. 56). It is the absence of meaningful contacts between the student and other members of the institutional community that contribute to this sense of isolation. Several studies cited by Tinto, revealed that relationships between the student and peers, faculty and other members of the institution are all critical in this process. Again, it is not uncommon for students to feel at a loss when transitioning to the new environment, but for some the experience of isolation is so difficult that it results in departure.

The third cause of student departure discussed by Tinto is the influence of external forces on students’ departure decisions. Tinto identified students’ competing obligations and multiple roles as factors often contributing to withdrawal decisions. Students attending non-residential institutions are more susceptible to external forces through the actions or circumstances of family, community members or state and national organizations (Tinto, 1993). Tinto explained that the weaker academic and social systems of nonresidential institutions are unable to provide sufficient safeguard against external threats to students’ educational interests.

These characteristics and experiences revealed the causes for student departure in higher education, but what are the dynamic forces in time that bring about the decision to depart? Tinto attempted to answer this question through a theory of student departure developed from the works of Arnold Van Gennep, an anthropologist who studied tribal cultures and Emile Durkheim, a 19th century sociologist.

Stages of Separation and Transition

Van Gennep (Tinto, 1993) presented a construct describing three stages of movement from childhood to adulthood. These stages: separation, transition and incorporation depict how the individual must separate from the familiar environment, explore the culture of the new environment and ultimately integrate into this environment. Tinto explained that Van Gennep’s theory “provides us with a way of thinking about the longitudinal process of student persistence in college and by extension, about the time-dependent process of student departure” (Tinto, 1993, p. 95).

A student's entrance into college is considered a rite of passage where the individual must separate from the previous culture, explore and transition into the new culture upon entrance and ultimately become incorporated into this new culture. Tinto explained that most new students are,

left to make their own way through the maze of institutional life. They, like the many generations of students before them, have to learn the ropes of college life largely on their own. For them, daily personal contacts with other members of the college, in both the formal and informal domains of institutional life, are the only vehicles by which incorporation occurs" (Tinto, 1993, p.99).

Students therefore depart when they fail to become incorporated into the institutional environment.

Durkheim's Study of Suicide and the Relationship to Educational Departure

Tinto next turned to Emile Durkheim and the study of community and suicide to more fully explain the process of incorporation and its relation to student persistence. Durkheim identified four types of suicide: altruistic, anomic, fatalistic and egotistical. Each of these types results from the individual's personal experience. Tinto paralleled these types of suicide to types of student departure.

Durkheim explained that anomic suicide is a response to the breakdown of norms resulting from a temporary societal chaos. Anomic departure may then result from "disruptive forces on campus that undermine the daily operation of the institution and undercut the normal bonds which tie individuals to it" (Tinto, 1993, p. 103). An illustration of anomic departure was a rise in student attrition resulting from the disruption of student riots in the 1960s and 1970s. Similarly, altruistic suicide is a form of suicide resulting from norms that view suicide as a morally desirable response to certain societal conditions. Altruistic student departure may occur when members of institutional subcultures hold beliefs that promote dropout. This too was experienced in the 1960s and 1970s when departing and reentering higher education became a prevalent practice among college students (Tinto, 1993). Fatalistic suicide on the other hand, is a response to an excessive level of control based on societal norms. Tinto described fatalistic departure as resulting from an oppressive level of institutional bureaucracy.

According to Tinto (1993), of the four types of suicide, egotistical suicide most accurately parallels student departure in higher education. For Durkheim, egotistical suicide occurs when individuals fail to become integrated and establish membership within the society. He identified two distinct types of integration: intellectual and social. Intellectual integration occurs from sharing a value system with community members. Social integration results from personal relationships that form through daily interaction. Tinto reasoned that colleges are established communities where integration also occurs at two primary modes: the intellectual or academic mode, and the social mode. According to Tinto, the academic system of the college consists of the traditional or formal educational activities, and the social system of the college

centers about the daily life and personal needs of the various members of the institution, especially the students. It is made up of those recurring sets of interactions among students, faculty and staff that take place largely outside the formal academic domain of the college. For students at least, it goes on in large measure in the residence halls, cafeteria, hallways, and other meeting places of the college (Tinto, 1993, p. 106-107).

Through this model of student integration, Tinto (1975) established a conceptual framework for understanding student departure. Leaving college is a result of the failure of the individual to integrate into the academic and social communities of the college. Therefore, as a human community, the academic institution is responsible for creating an environment where the integration process is facilitated, not hindered. Tinto stated, "it allows us to argue that involvement in those communities, especially those that are directed toward student learning, is the vehicle through which student learning and development occur and persistence arises" (Tinto, 1993, p. 132). Tinto's model of institutional departure has provided institutions of higher education with a new frame of reference regarding student retention. It requires administrators to ask themselves if they are working to provide their students with the richest and most integrative learning communities.

Validation of Tinto's Theory

Methodological Appeal of Tinto's Model

From 1975 to 1985, prominent scholars within higher education conducted a number of comprehensive investigations in order to assess the explanatory power of Tinto's theory. Two decades later, these studies are consistently cited in the literature and serve as the foundation for retention research. The variations among the research studies provide a historical perspective of the empirical developments of the model and offer a more solid understanding of its contemporary version.

The original group of researchers (Baumgart & Johnstone, 1977; Getzlaf, Sedlacek, Kearney & Blackwell, 1984; Munro, 1981; Pascarella, Duby & Iverson, 1983; Pascarella, Duby, Miller & Rasher, 1981; Pascarella & Terenzini, 1976; 1979; 1980; Terenzini & Pascarella, 1976; 1977) found its theoretical base the most appealing aspect of Tinto's model. Terenzini and Pascarella (1977) stated that within the attrition research, there existed "a feast of descriptive studies of attrition but the comparative famine of conceptual frameworks to explain it" (p. 26). The foundational researchers explained that previous work examining the problem of student attrition failed to adopt designs incorporating assorted variable sets that would successfully assess their strength within an analysis. Theory-based methodologies that utilized multivariate designs were needed to replace the existing descriptive, theory-absent, research employing single-variable statistical procedures.

Getzlaf, Sedlacek, Kearney and Blackwell (1984) identified an additional limitation within much of the existing attrition research. Researchers often viewed student dropout as a singular phenomenon and failed to distinguish voluntary departure from other forms of departure such as academic dismissal. Munro (1981) claimed, "shortcomings in the research included ambiguous definitions of dropouts, lack of control groups, and a lack of a representative sample of institutions for making estimates that could be generalized to the college population in the United States" (p. 133). Tinto's longitudinal approach was viewed as having more depth as it sought to conceptually distinguish between patterns which led to varying forms of dropout behavior normally included under the general rule of attrition (Terenzini & Pascarella, 1977).

To review, Tinto's (1975) model addressed the longitudinal process of student retention. Tinto asserted that students begin college with an established set of characteristics that contribute to initial levels of goal and institutional commitment. As these background characteristics interact with the systems of the institution, students become integrated both academically and socially. Integration in turn, influences subsequent commitment levels that determine whether a student will either stay or voluntarily withdraw from the institution. The series of initial studies is presented in light of how each was interpreted and empirically examined by the various research teams.

Foundational Studies

The foundational researchers (Baumgart & Johnstone, 1977; Getzlaf, Sedlacek, Kearney & Blackwell, 1984; Munro, 1981; Pascarella, Duby & Iverson, 1983; Pascarella & Chapman, 1983; Pascarella, Duby, Miller & Rasher, 1981; Pascarella & Terenzini, 1976; 1979; 1980; Terenzini & Pascarella, 1976; 1977) embarked upon operationalizing and empirically examining the elements of Tinto's model. This process required the researchers to formulate measures that best represented the elements of Tinto's conceptual framework. These studies varied considerably in their choice of samples, variable sets, statistical approaches, institutional settings, depth of inquiry, and empirical results. The series of initial studies can be separated into general validation studies, studies that examined student persistence in non-traditional settings and investigations that compared subgroups of departing students. These are presented in view of the researchers' approaches, designs, and methodological results. A final analysis offers a synthesis of general findings, consistent emergent themes, and researchers' recommendations for the direction of subsequent retention research and institutional practice.

General Validation Studies

Preliminary studies by Terenzini and Pascarella (1976; 1977) employed an Adjective Rating Scale consisting of descriptors typically expressed by students to rate class instruction (Terenzini & Pascarella, 1977). Students were asked to rate both their academic and non-academic lives in terms of how they matched 24 adjectives. For example, "I have found my

academic program to be: good, enjoyable, demanding, useless, practical, interesting, etc. (Terenzini & Pascarella, 1976; 1977). Students' grade point averages supplemented the academic rating scale and the number of informal faculty meetings and participation in organized activities assessed social integration. A post hoc analysis was completed comparing groups of returning and voluntarily departing students on gender and aptitude measures.

Multivariate analyses of variance and discriminant analysis were employed in these investigations. No significant differences were found between students who left the institution and those who remained in either gender or aptitude scores; however, these groups could be distinguished based on the integration constructs. Social and academic integration were statistically independent and relatively equal in distinguishing returning students from voluntary leavers. The two largest contributors to group differences included the level of informal interaction with faculty outside of the classroom and the degree to which the students believed their non-academic lives to be demanding. Students who remained at the institution perceived that their social lives were more challenging than students who voluntarily departed. Terenzini and Pascarella (1976) interpreted this finding to suggest that perceptions of a demanding or challenging social life indicated a high level of social integration.

Interested in capturing a representative sample of students from a broad array of American institutions, Munro (1981) derived a causal model to validate Tinto's theory drawing from the National Longitudinal Study of the High School Class of 1972, a national multi-institutional database. As pertinent background characteristics, Munro selected socio-economic status (SES)(a composite score involving the parent's education, income, father's occupation, and a household items index), ethnicity (measured as white or non-white), gender, aptitude scores specific to the NLS database, locus of control and self esteem measures, high school grades, parental educational aspirations for the student, and the student's own educational aspirations.

The students' grade point averages coupled with satisfaction scores concerning perceived intellectual development, constituted academic integration, and the students' satisfaction ratings of their perceived social life on campus comprised social integration. In this investigation Munro introduced Tinto's (1993) constructs of goal and institutional commitment. Goal commitment was measured by the student's anticipated educational level and institutional

commitment was measured through overall satisfaction with the ability, knowledge, and personal qualities of most teachers and with the development of work skills.

Consistent with Terenzini and Pascarella (1976; 1977), Munro (1981) reported that the entering characteristics of SES, ethnicity and gender on persistence were mainly indirect and conveyed through other variables in the model. Academic integration, however, directly influenced persistence, compared to social integration, which had no effect on persistence in this study. By including an examination of educational aspirations, Munro found that both the students' own educational aspirations and the students' perceptions of their parents' aspirations for them affected the student's current educational goal commitment. The students' aspiration level had a greater effect than the students' level of academic integration. Munro concluded by confirming Tinto's assertion that students' goal commitment is a central correlate of future enrollment decisions.

Pascarella and Terenzini (1979; 1980) continued their efforts to accurately capture the elements of Tinto's model within an empirical test. In these investigations, the research goal included the development of a multidimensional instrument that could represent the major dimensions of the Tinto model and identify freshmen students who later persisted or voluntarily withdrew from the institution. It was also the intention of Pascarella and Terenzini (1979) to examine potential interaction effects between measures of Tinto's constructs. The authors were specifically interested in identifying how integration measures interacted with certain pre-existing characteristics. For example, this investigation questioned whether the integration process is accentuating by enhancing the experiences of students already possessing characteristics necessary for success in college. Or, on the contrary, do experiences that integrate students into the college environment serve to compensate for an absence of traits that predict success in college?

For these studies the list of student pre-college characteristics was expanded from the initial studies and now included 12 entering characteristics. To assess student integration, participants reported on their amount of extracurricular activities and responded to a series of 34 items that addressed their perceptions of various elements of the institutional experience, and quality and quantity of faculty interaction. These items were factor analyzed and produced five scales that Pascarella and Terenzini (1979) termed Peer-Group Interactions, Academic and Intellectual Development, Interactions with Faculty, Faculty Concern for Teaching and Student

Development, and Institutional and Goal Commitments. Because the primary focus of this investigation centered on the saliency of the integration variables in predicting future enrollment behavior, Pascarella and Terenzini (1980) statistically controlled for the influence of student's grade point average and level of participation in extra-curricular activities.

The results from these studies confirmed that the five integration scales could differentiate leavers from stayers. When added to a discriminant analysis based on fourteen pre-college characteristics, freshman year academic performance, and extracurricular involvement, the five institutional integration scales developed for this investigation increased correct identification of persisters and dropouts in a cross-validation sample from 58.4 percent to 81.4 percent and from 34.5 percent to 75.8 percent, respectively (Pascarella & Terenzini, 1980).

Pascarella and Terenzini (1979) also identified interaction effects, offering evidence for the compensatory nature of integration. These findings demonstrated how integration serves to compensate for certain background characteristics that have proven to hinder success. For male students whose parents had little formal education, contact with faculty members to obtain career guidance had the strongest effect on student persistence. Similarly, for male students with low scores on the academic/intellectual scale, perceptions of faculty concern for teaching and students had the greatest positive influence on their retention. It was also proven that for men with low commitment levels, it was intellectual conversations outside of the classroom that most affected persistence decisions.

Following a similar pattern, women who initially expressed a low level of importance to graduating from the institution were positively influenced to persist by perceptions of faculty concern for teaching and students. Also, contacts with faculty outside of the classroom involving a discussion of intellectual matters impacted women students who scored low on the quality of their peer relationships. This finding not only showed that integration measures can serve to compensate for certain background characteristics, they also provide evidence that one form of integration in one domain can compensate for an absence of integration in the other.

Similar to findings from the earlier studies, levels of faculty interaction and faculty concern for students were identified as the strongest contributors to group identification, even greater than the influence of peer relationships. Pascarella and Terenzini (1979) concluded with a discussion of student-faculty interactions in terms of the psycho-sociological complexities that

influence a student's decision to persist or depart from an institution. They expressed how student and faculty interactions,

may provide interpersonal links with important adults in the institution which tend to compensate for the influence of an initially low commitment to the goal of graduation or relative absence of parental role models who themselves have substantial levels of formal postsecondary education. (Pascarella & Terenzini, 1979, p. 209)

As was the case in Pascarella and Terenzini's validation studies, the results were based on a sample of predominantly Caucasian 18-22 year old students drawn from a four-year residential institution. It was yet uncertain, however, if Tinto's model could successfully predict future enrollment behavior among a more heterogeneous group of undergraduate students.

Tinto's Model in Varying Institutional Settings

In order to examine the predictive validity of Tinto's (1975) theory across varying institutional types, Pascarella and Chapman (1983) designed a study that included samples from 11 diverse colleges and universities. Explaining the rationale for this investigation they wrote,

While the results of these investigations are generally confirmatory, they employ quite different operational definitions of Tinto's constructs, and are based on single institution samples at large, residential institutions. As a result, it is difficult to determine not only the extent to which the validity of the model is generalizable across institutions, but also the degree to which the model has validity for less traditional institutions such as 2-year community colleges or predominantly commuter schools. (Pascarella & Chapman, 1983, p. 88)

Utilizing an extensive list of measures, Pascarella and Chapman (1983) included variables from previously validated studies (Pascarella & Terenzini, 1979; 1980). Additional variables incorporated into this analysis were two scales that addressed students' needs for affiliation and achievement. Adhering more closely to Tinto's structure compared to previous studies, goal and institutional commitment were placed both at the beginning and the end of the model.

Pascarella and Chapman (1983) analyzed the data in terms of institutional type; two major variables demonstrated direct effects. Living on campus positively influenced persistence

whereas attending a two-year commuter institution negatively impacted persistence. Within the residential sample, results were consistent with findings from previous studies. Background characteristics failed to directly effect persistence decisions and were mediated by the students' experiences at the institution. Social integration demonstrated a direct influence on persistence and indirect effect through institutional and goal commitment. Institutional commitment soundly influenced persistence decisions compared to goal commitment. Finally, for the residential sample, academic integration demonstrated no influence on voluntary persistence (Pascarella & Chapman, 1983).

For students at the two-year and four-year commuter institutions, certain background characteristics directly influenced persistence. For the four-year sample, the student's high school achievement level had a direct effect on persistence and for the two-year sample, a negative relationship was found between measured needs for affiliation and persistence decisions.

Pascarella and Chapman (1983) discussed these differences in terms of overall emergent patterns among institutional types. At residential institutions the social climate appears to be a prevalent force for determining whether a student will choose to remain or voluntarily depart from an institution. The social climate mediates student background characteristics, allows for the integrative process to become manifest, and shapes student commitment levels towards the institution. Conversely, at commuter institutions, it is evident from these results that academics are more of the predominant influence on persistence decisions. For these students, social integration showed neither direct nor indirect effects on persistence and a negative relationship existed between affiliation needs and persistence. Pascarella and Chapman (1983) concluded that for commuter students, the institutional experience is marked by an absence of a social network. They wrote, "The social and cultural experience of college by commuter students may be so limited that it assumes a much less pronounced role in voluntary decisions to stay or leave than it does for students at primarily residential universities" (Pascarella & Chapman, 1983, p. 99).

Pascarella, Duby and Iverson (1983) conducted a study that utilized data from a non-residential institution to test the dimensions of the Tinto model. Results from this investigation supported the findings from Pascarella and Chapman (1983), revealing background characteristics and academic integration as the primary influences on non-residential students'

future enrollment decisions. They also established a negative relationship between social integration and student persistence.

These findings substantiated Pascarella and Chapman's (1983) conclusions that the social context of commuter institutions offers fewer opportunities for students to participate in socially engaging activities. For these students, disappointment with the quality or level of social involvement may lead to the decision to depart. Pascarella, Duby and Iverson (1983) suggested a reconceptualization of Tinto's model for students at commuter institutions. This revised model accounted for the unique aspects of the commuter students' experiences. They also recommended institutional action that increases social opportunities for students and allows for further student-faculty involvement.

These studies again confirmed the strength of Tinto's conceptual framework in predicting persistence patterns. Within these investigations, institution type materialized as a significant variable in distinguishing the collegiate system that exhibits the strongest influence in students' future enrollment decisions. Further research addressed the potential effects of additional variables including temporal aspects and varying forms of student departure. The designs of these studies included comparisons of student groups classified by specific moderator variables.

Tinto's Model and Subgroups of Departing Students

A final set of foundational researchers (Baumgart & Johnstone, 1977; Getzlaf, Sedlacek, Kearney & Blackwell, 1984; Pascarella, Duby, Miller & Rasher, 1981) approached the examination of Tinto's model by comparing student subgroups. An understanding of subgroups offers the researcher an opportunity to detect unique characteristics and possible relationships between variables that may go undetected by examining only a large heterogeneous group (Baumgart & Johnstone, 1977).

Baumgard and Johnstone (1977) sought to identify specific traits of students within attrition subgroups and examine how these characteristics interacted with the institutional environment. A wide-angle approach was assumed for identifying factors associated with student attrition. They began with fifteen conceptual clusters consisting of ninety-two retention variables associated with Tinto's model as well as with preceding attrition research.

Baumgart and Johnstone (1977) identified several distinct groups within the heterogeneous sample of students being evaluated. They stated, “it can be more revealing and profitable to derive relationships which are qualified according to a number of moderator variables” (p. 557). These subgroups were formed according to the point of student departure and were described as 1) students who persisted through the second year, 2) students who left the institution prior to completing final exams, 3) students who left throughout the second year period and 4) students who were academically dismissed from the institution. Based on Tinto’s (1975) recommendation, Baumgart and Johnstone took an additional methodological step and divided the sample by gender and enrollment status.

Baumgart and Johnstone (1977) found that among full-time males, compared to the other three subgroups of departing students, persisters entered the institution with higher aptitude scores, were more interested in degree attainment, had more friends, and were more satisfied with the academic aspects of university life. Similar findings were observed among groups of female students. The researchers marked these differences among groups as an indication that those who persisted were better integrated into both the academic and social realms of the institution.

Through the comparison of student subgroups based on the time of their departure, these authors concluded that student dropout is most prevalent in the first year of school. They also indicated that students are not a homogeneous group, and retention problems must not be addressed without taking into consideration the unique characteristics of student subgroups. It was also advocated that the university make an effort to integrate students both socially and academically into the institutional environment.

Getzlaf, Sedlacek, Kearney and Blackwell (1984) were interested in discriminating between subgroups of students who transferred to a different institution versus those who departed higher education completely. It was hypothesized in this study that transfer students would be more academically integrated and educationally committed than departing students who were hypothesized to show a higher level of social integration (Getzlaf, Sedlacek, Kearney & Blackwell, 1984).

In the general comparison of students who persisted compared to students who withdrew, perceptions of academic performance were the primary distinguishing factor. More specifically, students who left the institution experienced a greater decrease in their cumulative grade point

average from high school to college compared to those who were retained. Getzlaf, Sedlacek, Kearney and Blackwell (1984) viewed integration into the academic realm as the students' perceived levels of academic progress.

There were differences noted between departing students and transfer students as well. Students who withdrew from higher education had lower academic aptitude scores, performed at a lower level academically, and were more dissatisfied with general course requirements. They attributed their leaving to personal reasons whereas transfer students specified reasons relating to the institution as reasons for withdrawal (Getzlaf, Sedlacek, Kearney & Blackwell, 1984).

Pascarella, Duby, Miller and Rasher (1981) compared three subgroups of students, freshman to sophomore persisters, freshman who temporarily discontinued their studies, and students who completely withdrew from the institution. The focus of this study compared these groups on an extensive list of pre-enrollment variables. Their findings revealed that the group of students who stopped out of higher education could be identified based on their race, prior academic achievement, and educational intentions. African American students with a relatively high level of high school achievement, and expressed intentions that temporarily leaving as a viable option, were those students most likely to stop out from the institution.

Overview of Findings from Foundational Literature

The preceding overview of the foundational studies addressing the predictive validity of Tinto's (1993) model provides a sample of the extensive list of studies in this field. This presentation offers evidence to support the effectiveness of Tinto's conceptual framework in identifying the essential elements of the process leading to students' future enrollment decisions. Not all studies generated identical support for each of the elements within Tinto's (1975) model, yet the collective findings solidly support Tinto's conceptual framework. More importantly, these studies offered pertinent insights into the factors contributing to enrollment decisions. A synthesis of findings is presented.

Consistent with Tinto's (1975) assertion, among traditional students, background characteristics could not independently predict future enrollment decisions. Collectively, the foundational studies addressed an exhaustive list of entering characteristics, yet few studies could demonstrate significant links between pre-college characteristics and persistence.

Pascarella and Chapman (1983) and Pascarella, Duby and Iverson (1983) recognized the dominance of the academic climate and weakness of the social climate within non-residential institutions. These researchers recommended institutional initiatives that would develop a stronger social network for students attending these institutions.

Also consistent with Tinto's theoretical foundation was the solid evidence supporting the saliency of the integration constructs. The foundational researchers confirmed that students' enrollment behavior is contingent upon how their institutional experiences are viewed. Pascarella and Terenzini's (1979; 1980) integration scales offered a comprehensive and clear depiction of the array of student experiences that influence commitment levels leading to future enrollment behavior. In each of the foundational studies, measures of integration into the college community contributed to student's enrollment decisions demonstrating the strength of these constructs. The findings from these investigations also demonstrated the importance of student integration within both the academic and social domains of the institution. Variations were found among which domain dominated for certain students, yet the overall findings revealed that both are important and serve a distinct function.

The weight of these integration constructs within a retention model becomes evident when the measures of both academic and social integration are compared across studies. The variables used to address the integration constructs differed considerably in both breadth and depth. For example, Munro measured the integration constructs by students' grade point average and satisfaction with their intellectual development and social life on campus. In contrast, Pascarella and Chapman (1983) assessed students' grade point average, expected grade point average for the second semester, the hours spent studying, number of unassigned books read for pleasure, the number of cultural events attended, informal contacts with faculty addressing academic topics, peer conversations discussing academic topics, participation in honors classes, and participation in career development programs. Despite such a large range of variable selection, the integration constructs maintained their efficacy in differentiating students who continued their studies at the institution and those who voluntarily departed. This pattern again speaks to the significance of integration constructs within a retention framework. It also reveals the extent to which the constructs are malleable, and can retain validity if adjusted to match specific institutional contexts.

The actual findings from this wide array of research studies provided information that was both ambiguous and inconsistent. There were instances where results contradicted researchers' hypotheses. It is evident from this body of research that no statistical technique can address every possible variation of student experiences or account for all factors influencing students' persistence decisions.

Tinto (1982) addressed the limits of theory and practice in student attrition. He acknowledged,

Despite great expectations, we have yet to move into the realm of what Merton refers to as 'grand theory'. We remain in the middle range where our theoretical models serve to explain only a portion of the wide range of behaviors that constitute the universe of social interactions. (p. 688)

Tinto (1982) revisited the development of his model and explained that the model was intended to account for the differences between involuntary and voluntary withdrawals, and to address the complexities of students' interactions that influence enrollment behavior. Tinto acknowledged that the model does not adequately address every element of the persistence process, yet maintained that the model sought to place responsibility on colleges and universities to identify solutions for reducing institutional attrition rates.

Tinto (1980) suggested that institutions market themselves in realistic and accurate ways to limit discrepancies between student expectations and realistic experiences. He also suggested that institutions make greater efforts to ease the transition from high school to college by introducing students to members within the environment prior to their arrival on campus. The final recommendation was to facilitate student and faculty interaction on campus by sponsoring gatherings that bring students and faculty together as well as assigning faculty to smaller classes allowing for greater contact with students. He explained, "the more effort institutions put into the education, not merely schooling of their students, the more they will retain" (p. 698).

Student and Faculty Interaction

Significance of Student and Faculty Interaction

An essential finding from the foundational works is the importance of faculty relationships in the lives of students. In each of Pascarella and Terenzini's (1976; 1977; 1979; 1980) analyses, student perceptions of faculty emerged as a dominant theme and were consequently included within the expanded integration constructs. In their preliminary studies, Terenzini and Pascarella (1976; 1977) found the level of informal interaction with faculty outside of the classroom to be one of the strongest contributors to differences between departing and returning students.

Pascarella and Terenzini's (1979) work which focused on the interaction of variables also proved the significance of student perceptions of faculty and how these perceptions interacted with particular background characteristics. The students who most benefited were those students identified to be already at-risk including lower achieving students, students from families with lower levels of education, and those with initially low aspirations towards degree completion. Again the importance of student faculty relations was confirmed in Pascarella and Terenzini's (1980) later work when faculty interaction and faculty concern for students were identified as the greatest contributors to the identification of departing or persisting students, a contribution greater than the effect of relationships with their peers. They concluded by stating,

It seems clear that the attrition process is a far more complex phenomenon than we have tended to think it is, and certainly the bulk of the dropout research fails to take into account the weblike network of relations to which the studies described here have begun to point. Unless the designs of future studies are sensitive to these considerations, they are unlikely to meet the expectations of either researchers or administrators. At best, they will yield only a partial, oversimplified picture of what seems to be a highly complex set of dynamics. (Terenzini & Pascarella, 1980, p. 281)

Based on the consistency of these results, additional researchers have focused their work on this important association between students and faculty. The review of literature will now turn to an exploration of this topic and present findings from studies that explored student and faculty relationships and their influence on student retention.

Dynamics of Student and Faculty Relationships

As the author of a chapter dedicated to faculty involvement in *Increasing Student Retention*, Toy (1985) stated that, “It is clear that the performance and attitude of the faculty both in and outside of the classroom is a significant variable in the complex equation by which students form an opinion” (p. 385). Within the body of foundational retention research, an important link between student/faculty relationships and persistence was established and points to the existence of significant dynamics occurring within the interaction between students and faculty. With the promise of identifying more information leading to potential solutions to the attrition problem, various researchers set out to further explore these dynamics. Their findings further substantiate student-faculty relationships as important to the retention puzzle, and offer additional evidence to support the need for institutions to promote a student-centered institutional climate.

Within the majority of studies that examined student- faculty interaction in relation to retention, the influence of faculty served to integrate students to the institution. As previously presented, Pascarella and Terenzini (1979) examined the specific forms of interaction and designated them into either the academic or the social realms of the institution. Exchanges involving the formal role of faculty were included within the academic domain, and alternately the informal types of exchanges were assigned to the social domain. Proven as an effective method for discerning the forms of interaction, different researchers followed this method and examined student-faculty interaction as it occurred within the academic and social domains of the integration process. Adhering to this approach, the findings from these studies will now be presented.

Based on evidence from studies on this topic, it is faculty interaction that directs a student’s integration into the academic realm of the institutional community. Although faculty members represent only a segment of professionals employed at a college or university, student impressions of the institution are shaped by experiences with faculty. Schreiner (1988) addressed the importance of first impressions in influencing student opinion of the institution and the focus on faculty when forming that opinion. Faculty members are the frontline representatives of the institution and their approach to students and in their role as educators, are

viewed as a reflection of the institution. Subsequently, if a student becomes disappointed or dissatisfied with the performance or manner of the faculty, it often translates into blanket dissatisfaction with the institution. Additional research substantiated this finding. Stith (1994) compared persisting and departing students at a large university and found that 62.5 percent of the retained students were impressed by the caliber of instructors, compared to 35.7 percent of those students who were not retained.

In an explanation of this connection between student discontent and withdrawal decisions, Nordquist (1993) referred to incongruence, the first of two institutional experiences identified by Tinto. Tinto (1993) stated that incongruency within the academic realm occurs when the student's perceived needs, interests, and preferences are mismatched with existing offerings, and often grows out of poor teaching. Employing a qualitative methodological approach to test the central elements to Tinto's model, Nordquist stated that due to the abstraction of Tinto's model it was necessary to hear directly from students who made the decision to leave. Nordquist interviewed several students who had withdrawn from institutions in Utah. Questions were designed to address the student's family background, personal goals as they related to college attendance, best and worst college experiences, social interaction, interaction with faculty, availability of academic advising, and the circumstances surrounding the decision to leave school.

Nordquist (1993) reported that all but one student described their overall best and worst college experiences in terms of positive or negative experience involving interaction with a faculty member. Nordquist wrote, "This was clearly manifest by the students' comments, as most explained their dissatisfaction with and departure from college in terms of lack of or negative interaction with faculty and advisors" (p. 12). Student comments revealed that faculty "were trying to weed out students, that the faculty did not care if students came to class or learned, and that faculty wouldn't answer student questions" (Nordquist, 1993, p.13).

Endo and Harpel (1981) addressed additional academic effects of student-faculty interaction and stated that contact with a faculty member influences a "student's general way of thinking, methods of problem solving and interest in life goals" (Endo & Harpel, 1981, p.1). Strage (1999) measured motivational profiles in relation to academic and social integration and found that positive perceptions of rapport with faculty emerged as the greatest and most consistent predictor of a student's ability to adopt a mastery achievement orientation. Mastery

achievement orientation described a student who “welcomes challenges, possesses the ability to maintain focus, persists in the face of obstacles and maintains the belief that intelligence is increased through diligent effort” (Strage, 1999). Similarly, Woodside, Wong and Weist (1999) examined the effects of student-faculty interaction on a college student’s academic achievement and self-concept. As the independent variable, the frequency of teacher immediacy behaviors (responsive verbal and non-verbal cues and gestures), contributed significantly to students’ perceptions of their scholastic competence.

It appears that socially, the influence of faculty is equally powerful. According to Nordquist (1993), isolation is the second experience identified within the Tinto model that offers an explanation for the connection between student-faculty interaction and social integration. Tinto (1993) described institutional isolation as the experience of individuals who cannot establish themselves into a social network and thus lack the “personal bonds that are the basis for membership in the communities of the institution” (Tinto, 1993, p. 56). It is the absence of meaningful contacts between the student and faculty that contribute to this sense of isolation. Nordquist’s qualitative work again endorsed Tinto’s position by recounting participants’ collegiate experiences. Students viewed faculty-student interaction as crucial for a positive educational experience. Nordquist specifically identified mentoring relationships as having the greatest impact on social and academic integration and subsequent enrollment decisions.

Adopting a similar conceptual approach, Endo and Harpel (1981) examined types of interaction and compared “friendly” versus “formal” interaction on several student outcomes categorized as personal/social, academic achievement, and satisfaction with education. Formal interaction was described as perfunctory, where discussions are limited to objective topics. Friendly interaction on the other hand involves an interactionist approach, where a broad range of topics is discussed including more personal subjects relating to the student’s cognitive and developmental growth. The findings from this study revealed that the amount of friendly interaction affected nine of the fourteen outcome variables compared to formal interaction, which affected only two of the variables. These effects were not limited to affective outcomes, Endo and Harpel emphasized, and cognitive outcomes were also influenced by friendly interaction.

Schreiner (1988) explained that student-faculty contact facilitates social interaction at a critical time for students. Prior to the period when strong peer networks have formed, faculty members serve as important adults with whom students can relate. Toy (1985) added:

Many students seem to greatly value faculty friendships perhaps because they see their instructors as survivors in the academic struggle in which they are currently engaged. Perhaps they respect the expertise and intellect of the faculty. Perhaps the faculty function as surrogate parents from time to time, mature adults with whom students can discuss serious issues. Probably, all of these factors and more are involved. (p. 387)

Synthesis of Findings

The studies presented here provided additional data that further clarify the underlying forces that serve to foster student integration. As Tinto (1993) described, integration for students begins with their parting from the previous setting of home and secondary schooling. When the student leaves the home environment this transition is marked by a separation from individuals significant to the student, including parents or other guardians, siblings and friends. It therefore follows that students would define the transition to the new environment by new relationships. Because learning is the purpose for entering this environment, it follows that faculty relationships would be seen as foremost in students' minds, given that faculty are the primary agents of the institution. The research findings presented confirmed that students' impressions of the institution are transmitted through their impressions of faculty. Students perceive faculty as the facilitators of a successful transition since it is the quality of experiences that either enhances or integrates the student, or contributes to isolation leading to withdrawal. Therefore, perceptions of faculty behaviors and attitudes either legitimize or negate a student's membership within the institutional community.

Another important aspect of the instructor-student relationship is the social component. The beginning of college coincides with a significant developmental period as a student makes the transition from adolescence to adulthood. This process requires that a student manage more responsibilities, make major life/career decisions and balance the demands of new academic and social requirements. Students rely on adults for guidance and mentoring. Faculty members

serve as dependable role models since they themselves have undergone similar experiences and have ultimately succeeded. It is therefore fitting that the inclusion of faculty within the student's social network is very important to the integration process.

The connection between faculty relationships and the integration process has been established in this section of the paper. Faculty, however represent only one segment of academia. The actions, behaviors and attitudes of other higher education professionals may also influence student integration. A body of literature explores the role of the academic advisor and confirms the significance of this professional in shaping students' collegiate experiences.

Academic Advising

Academic Advising as an Effective Institutional Strategy

In the introduction to *Increasing Student Retention*, a text compiling research and strategies for effective retention practices, Noel (1985) recognized the impact of faculty and professional academic advisors within higher education. Noel reasoned that enrollment decisions are the by-product of student satisfaction, a state produced by capable and concerned individuals who operate out of the principle that their focus is on positively influencing students' lives. Noel portrayed the student decision-making process concerning the choice to stay or depart from the institution as a cost-benefit analysis. Students are continuously assessing the value of their experiences and weighing them against the costs; when they sense that the benefits are not being delivered or that they are not valued members of the institution, they make the decision to leave the institution.

In order to tip the scales to the benefit side, Noel (1985) believed that extensive institutional efforts must be made to provide value-added and enriching educational experiences. This process involves identifying and cultivating student talents. It places the emphasis on student learning, growth and development. It includes clear interpretations of curricular requirements and explanations of curricular options. Facilitating a staying environment involves commitment from all members of the academic community. Contrary to the belief that retention efforts should be considered a student services responsibility, Noel maintained that the primary players involved in a campus retention effort are those on the academic side of the institution.

Noel stated, “This kind of guidance takes top-notch frontline teachers in the classroom and academic advisers in the advising office who are willing and able to interpret the curriculum for students” (p. 9). In order to realize the significance of academic advising within a staying institutional climate, the role of the academic advisor will now be considered.

The Role of the Academic Advisor

Margaret King (1993) wrote,

Academic advising is the only structured service on our campuses that guarantees students some kind of interaction with concerned representatives of the institutions. Advising can therefore be viewed as the hub of the student services wheel, providing the linkages with other support services such as career planning, counseling, financial aid and tutoring. Advisors play a key role in helping students become integrated within the academic and social systems on campus, which in turn contributes to student growth, satisfaction and persistence. (p. 21-22)

Crockett (1985) explained that academic advising evolved from a simple perfunctory activity where advisors prescribed required courses, to a more comprehensive and purposeful activity that emphasized student development. O’Banion (1972) was the original theorist who made this distinction between prescriptive and developmental advising. Five steps of O’Banion’s model were listed as 1) exploration of life goals, 2) exploration of career goals, 3) selection of a major or program of study, 4) selection of courses and 5) scheduling of courses.

The developmental approach to academic advising continues to evolve today. Current literature on academic advising includes an expansion upon O’Banion’s (1972) original model and incorporates additional functions of the contemporary academic advisor within higher education. Based on existing research, the advising function can be separated into three primary responsibility areas: the conveyer of knowledge, the referral agent, and the mentor.

The first, conveyer of knowledge involves the role of resource person. Advisors are responsible for knowing and communicating current institutional rules, procedures, timetables and policies (Pettress, 1996). The transmission of this information is made within a broader context of the student’s interests, values, potential major and career choices (Fago, 1995; Frost, 1991; Wade & Yoder, 1995). Fiddler and Alicea (1996) wrote that this function involves

assessing student needs, eliciting cognitive, affective and behavioral information, analyzing personal and institutional data, interpreting students goals, and determining the most effective intervention strategies.

The second primary responsibility involves that of referral agent (Beasley-Fielstein, 1986; Petress, 1996). Fago (1995) explained that academic advisors should be equipped with basic knowledge of career counseling, study skills, and low-level interpersonal problem solving. When the extent of a problem moves beyond the purview of the academic advisor, it is the responsibility of the advisor to be aware of appropriate offices on or off-campus that specialize in the student's particular situation. Petress (1996) wrote that the academic success of students depends on their physical, mental, emotional and spiritual health. In many cases a referral to another service on campus is necessary, however it is "the advisor's initial understanding, empathy, and competent referral that is the key to student well being. Students who do not really know, trust, and frequently interact with their advisor, seldom seek the help they need and deserve" (Petress, 1996, p.2).

The final role of the academic advisor is that of personal mentor. This involves establishing and sustaining rapport and trust while focusing on the student's individual needs and personal growth requirements (Wade & Yoder, 1995). Frost (1996) asserted that the recognition of the student's individuality makes this relationship responsive to pluralism through the encouragement of students to explore their differences as positive factors. Fiddler and Alicea (1996) concurred and stated that the abilities to communicate and counsel, rest on respect for the individuality of each learner and the goal of establishing and sustaining rapport and trust with a richly diverse population of students. The role of mentor involves a commitment of time and a demonstration of a caring attitude towards the student (Beasley-Fielstein, 1986). This relationship also offers stability, assurance and consistency while serving as a source of confidential guidance, affirmation and support (Petress, 1996).

Advising Delivery Systems

Beasley-Fielstein (1986) described small colleges of the nineteenth century as intimate places where personal relationships with faculty were fostered and were easily formed. Within an historical account of higher education in the United States, Lucas (1994) addressed an

important change that occurred throughout the first half of the twentieth century. Student activities increasingly became an important component of the collegiate experience, and educational leaders recognized the potential benefits associated with institutional involvement in guiding and directing extra-curricular activities. Lucas explained this shift as a renewed interest in attending not only to the intellectual side of education but the social, emotional and physical development as well. At this time, student housing, medical services, career and academic counseling were now added to the educational function on college campuses. Lucas (1994) wrote that by the 1920s and 1930s, the full-time professional academic advisor became a primary function of an extensive extra-academic support structure. Professional advisors substituted for faculty who were unable or unwilling to take the time to provide advising services to students.

Crockett (1985) offered a more recent description of academic advising delivery systems employed by colleges and universities. These include faculty advising, professional advising, peer advising, and paraprofessional advising. Faculty advising was identified as the predominant provider of advising services. These advisors are considered experts in their academic subject and familiar with departmental offerings and professional opportunities within their fields. Faculty however may have biases toward their own departments or may feel that their advising duties are in conflict with their other responsibilities.

The second most widely used advising delivery system is the use of professional academic advisors whose full-time work is dedicated to advising students. Crockett (1985) explained that compared to faculty advisors, professional advisors are not limited by departmental biases. They are hired specifically to assist and counsel students and thus typically possess the skills, abilities and intentions to serve students. The limitations of this role include a lack of knowledge concerning specific course content and career opportunities within a specific discipline.

Peer and paraprofessional advising were also included as institutional delivery systems. Crockett (1985) recognized their contribution as additional sources of student support yet cautioned that these advisors typically lack the training, experience and judgment necessary to handle some of the more complicated aspects of academic advising.

Student Perceptions of Academic Advising

According to the current literature examining academic advising, students perceive advising as an essential component of their educational experience. Hendel and Tomsic (2000) cited a study administered by the State University of New York to undergraduates at seven research universities. The project was inspired by Boyer's work, *Reinventing Undergraduate Education: A Blueprint for America's Research Universities*, and served to understand from the students' perspectives changes that they would like to see made within higher education. According to Hendel and Tomsic, "Students at all campuses overwhelmingly expressed a desire for advising on selection of courses and on the choice of and preparation for a career" (pp. 3-4).

Fago (1995) reported on the validation of the Advisor Effectiveness Questionnaire (AEQ), an instrument developed to measure student satisfaction of a newly implemented academic advising program at a small liberal arts college. The authors unexpectedly found that students did not base their satisfaction with advising on several independent factors, instead advising was perceived as a general experience. A subset of thirteen items which measured satisfaction with different aspects of the advising process, constituted the first independent factor, global satisfaction with advising. The second independent factor reflected student perceptions of their adjustment to the institution. Students indicated that they viewed advising as a mentoring relationship as opposed to a technical process, findings in agreement with current definitions of academic advising. It was also noted that student perceptions of their adjustment difficulties were independent of perceptions of advising, suggesting that personal difficulties do not color the assessment of the advising process (Fago, 1995).

Beasley-Fielstein (1986) also examined student perceptions of the developmental academic advising relationship. Twenty students who had originally completed an institutional telephone survey and answered questions on academic advising were asked to participate in a more extensive interview which addressed various aspects of the advising relationship. Twenty students participated, 13 students who had originally expressed satisfaction with advising and 7 who expressed dissatisfaction. Each student was asked to describe and rate advisor/advising qualities and characteristics, behaviors, experiences, methods of delivery, perceptions of the relationship, and suggestions for improvement.

Satisfied students who perceived advisors as helpful believed that advisors were generous with their time, accessible, a source of accurate information, and willing to take a personal interest in students. Dissatisfied students on the other hand, described advisors as unpredictable, indifferent, intimidating, and inaccessible. Themes of effective advising that emerged from the student interviews included the importance of 1) advisor expediency and efficiency in addressing student problems, 2) possessing an attitude that advisors are concerned about students, 3) taking a personal interest in students, and 4) operating out of a context of educational and career goals. Dissatisfied students' themes were similar to those of satisfied students, only their comments reflected a need for improvements. These students urged the administration to select advisors based on their ability to relate to students and demonstrate an interest and willingness in helping students (Beasley-Fielstein, 1986).

Belchair (1999) also studied student satisfaction with academic advising and learned that students focused on the interpersonal when rating academic advising. Employing a survey by the American College Testing organization, students were asked to rate their advisor and advising practices. Survey items were analyzed and revealed six distinct aspects of academic advising. Consistent with previous research assessing student opinions of advising, these participants emphasized the interpersonal components of the advising process. The following advisor qualities were reported as integral to satisfaction with advising: encouraging, proactive, respectful, approachable, personally knowledgeable about the advisee, on time for appointments, unhurried and available when needed. These findings support Noel's (1985) assertion that students are seeking personal attention and support from advisors, the individuals responsible for providing guidance and support as students make their way within the institutional environment.

Additional studies have captured student disappointment with advising. In a survey conducted by Kent State University (1993) recent graduates were asked to assess campus academic programs, services, and the overall institutional climate. Students were asked to rate and comment upon campus services including registration, advising, student activities, student records, career planning, graduation, program curriculum, teaching quality, course availability, and course content. Among all the listed areas, academic advising received the lowest rating score, and was further corroborated by several negative comments. Students attributed their disappointment to advising errors, the failure of advisors to keep scheduled appointments,

general incompetence, and a lack of appreciation of student needs. Additional researchers (Lyons, 1991; Nordquist, 1993) also reported student dissatisfaction with academic advising.

Within this section, it has been demonstrated that academic advising maintains a critical role within higher education institutions. Developmentally, academic advising serves to shape students' future goals and aspirations within the context of educational offerings. Advisors serve as institutional resource people connecting students to offices on campus where they can best be served. Advisors act as mentors for students who leave behind their network of family and friends and rely on advisors for information, affirmation and guidance.

It has also been shown that students are not always satisfied with academic advising (Lyons, 1991; Nordquist, 1993). Is this dissatisfaction strong enough to taint students' overall opinions of the institution? Would a dissatisfied student depart from the institution based on their experiences and dissatisfaction with advising? It has been established that student perceptions of faculty interaction can significantly influence a student's level of integration into the academic and social domains of the institution (Pascarella & Terenzini, 1979; 1980; Terenzini & Pascarella, 1976; 1977). Can the same be said for student perceptions of the academic advising relationship? Within the higher education literature several researchers have explored the link between academic advising and student retention.

Academic Advising and Student Retention

Belcheir (1999) wrote that in the past good advising has often gone unrecognized, however institutional research has more recently considered academic advising as an institutional activity worthy of investigation. Belcheir attributed this change to a movement on the part of institutions to look more closely at the needs and concerns of students and potential linkages to attrition rates.

A Review of the Advising and Retention Literature

Crockett (1985) stated, "Academic advising, effectively delivered, can be a powerful influence on student development and learning and as such, can be a potent retention force on the campus" (p.244). Beal and Noel (1980) reviewed over 900 institutional retention programs

and reported that institutional administrators rated inadequate academic advising as a primary factor associated with student attrition. Various researchers have examined the relationship between advising and retention and based on the results offered various institutional recommendations for shaping the role of the advisor to increase retention. A review of the literature on this topic brought forth several approaches to understanding this link between academic advising and student retention.

Habley (1991) defined academic advising as “providing assistance in the mediation of dissonance between student expectations and the actualities of the educational environment” (p. 46). According to Habley, student dissonance occurs at two levels, at the first level students enter the institution with unclear expectations regarding their own goals and academic abilities. At the second level students enter the university without sufficient knowledge of how the higher education experience will contribute to the realization of their goals. Habley stated “the existence of services within higher education which assist in the mediation of these dissonances is critical and academic advising plays a pivotal role in the search for meaning in the educational environment” (p 46).

Habley (1991) developed the advisement-retention model as a method for understanding the factors within the educational climate that contribute to a student’s decision to remain or leave the institution. The academic advisor positively affects retention by understanding these factors and assisting the student with creating an environment that best matches student goals with institutional offerings. However it first must be established that in order for advising to effectively influence student retention, it must be “a student-centered, developmental process rather than a prescriptive and clerical activity undertaken for the promulgation of institutional rules and regulations” (Habley, 1991, p. 46). Habley also asserted that institutions must recognize that the best method for retaining students is to make a concerted effort to continually improve the services that allow students to better grasp their educational objectives and connect these objectives to campus programs.

Habley’s (1991) model for student retention had three components: the educational environment, reasons for leaving, and reasons for staying. The educational environment encompasses the aspects of the climate that contribute to the overall college experience and dictate either reasons for leaving or reasons for staying. Several continua were developed for the environmental elements that predicted retention or attrition. These included: institutional

match versus mismatch, academic relevance versus irrelevance, classroom stimulation versus boredom, concern for students-lack of concern for students, and high E (effort) + A (ability) + R (reward) versus low E + A + R. Habley stated that the role of the advisor is to significantly guide a student to the side of the continuum that leads to the student's persistence. For instance, an advisor can help students select the right major, offer course suggestions that contribute to the student's goals, provide accurate assessment so students are placed in appropriate course levels, and can demonstrate a genuine concern for the student's well-being.

Habley's work provided a clear depiction of the role of the academic advisor in minimizing the dissonance between students' educational goals and institutional offerings. This work, however, was not grounded in empirical research and lacked evidence of specific and uniform methods to be employed by advisors in order to bring students to the retention side of the continuum. These recommended actions require that the advisor possess levels of sensitivity and sound judgment that extend beyond acquiring a specific body of knowledge. Again Habley provided a comprehensive structure for linking advising to retention, however his work was not backed with empirical data, and he failed to address the implementation aspects of the Advisement/Retention Model.

Creamer (1980) took a similar approach by identifying the main themes found in the retention research and proposed how advising can contribute to those factors that predict success. Based on a synthesis of the advising/retention literature, Creamer identified targeted recruitment, planned and quality advisement, frequent student/faculty interaction, sound academic performance, integration into the campus environment, and adopting a developmental approach as areas where educational advising impacts retention. Creamer stated, "the quality of educational advisement may be as basic to the achievement of student and college goals as is the quality of teaching" (p. 11). The themes identified in this research article were analogous to Habley's themes linking advising to retention, yet these themes were also addressed in general terms and failed to address how specific results can be achieved within various types of institutions.

Janasiewicz (1987) conducted a study at Florida State University and tracked 500 lower-division undergraduate students who had withdrawn from the institution. The purpose of this study was to assess the accuracy of self-reports commonly implemented at institutions to trace the reasons why students depart from higher education. Janasiewicz wrote, "The use of self

reports in the area of retention research can still be useful, however the interpretation of the results becomes complex. Interpretation takes on two levels, the students' perception of reality and reality itself" (p. 24).

In this study students were asked to complete a survey and rank order 18 reasons for withdrawal. Based on the results of these surveys, former students were classified into three models of leaving behavior (Janasiewicz, 1987). Models were the "discouraged student", "the academics", and "the financial model". The discouraged student leaves because of a lack of support at the institution. The academics were students who left the institution because their academic goals did not match institutional offerings. The financial model encompassed students who withdrew because they could no longer afford to stay in school.

Janasiewicz (1987) noted that only 21.1% of the students who selected financial reasons as the cause of their departure could identify an exact reason for a financial change, such as a death in the family. Alternatively, 78.9% of students in the financial model did not include any additional information. Although these students were not academically dismissed, 20.2 % had a GPA below 2.0. This led Janasiewicz to conclude that students often indicate financial reasons as the cause for leaving when this reason may mask other reasons for the decision to withdraw. Janasiewicz discussed the implications for advising and stated that advisors must be aware of this phenomenon and probe for the true reasons leading to the decision to leave. Only then can the advisor appropriately assist the student by addressing these reasons and offer viable alternatives to prevent withdrawal.

The results from Janasiewicz's (1987) work provided insight into the withdrawal decision. It may be met with personal dishonor and therefore students may mask their genuine reasons with perceived legitimate reasons for withdrawal. Although Janasiewicz recommended that advisors probe into the actual reasons for departure, this may not be a viable recommendation. Within the methodology section of this paper, Janasiewicz stated, "Many of the students who leave this campus do not go through the formal withdrawal process, but simply fail to register for the next semester or disappear from the campus" (p.24). Unless students are required to meet with an advisor prior to withdrawal, the advisor may have no knowledge of the student's intent to withdraw and therefore is unable to intervene in this critical decision making process. Again the results of this study provided a clearer picture of student perceptions

regarding the withdrawal decision, however students often make this choice away from the campus and do not make contact with an advisor prior to departing the institution.

Other researchers approached the subject of advising and student retention by instituting unique academic advising programs and comparing participants to non-participants. Patrick, Furlow and Donovan (1988) measured the success of CORE, the comprehensive advising/orientation program with high-risk students at a regional campus of a large public research university. The CORE approach consisted of bi-weekly, one-on-one intensive academic advising as well as a first-year-experience course that included a career development and educational planning component, personal adjustment and decision-making, and an introduction to campus life. Students were invited into the program if their records indicated evidence of academic deficiency, a mismatch between aptitude and major choice, or an expression of career uncertainty or personal concerns. The CORE program was administered by a team made up of the director of Academic Affairs, two professional counselors and six faculty members selected by their peers for advising competence (Patrick, Furlow & Donovan, 1988).

A comparison of participants and non-participants revealed that CORE students were retained at a 9.52 percent higher rate than non-CORE students. This occurred despite lower academic achievement and confidence levels among CORE students. CORE participants also transferred to another campus within the university at a higher rate compared to non-participants. The authors interpreted these results as the product of more intensive educational planning and career decision planning. It was also noted that the CORE program created a “ripple effect within the campus community” (Patrick, Furlow & Donovan, 1988, p. 33). Faculty became more aware of support services available on campus, staff developed sensitivity to the needs of high-risk students, and students sensed that faculty and staff were concerned about their experiences. Based on the results of this study, it appeared that the CORE program was very effective in increasing retention efforts on the campus. The authors listed different program outcomes based on a comparison between participants and non-participants.

A similar program was also implemented at the University of Kentucky. Confronted with an 11% enrollment decline and a 40% class attrition rate, the Academic Advising, Intervention and Monitoring System (AIMS) was developed through a series of workshops. The program was designed to counsel and monitor first semester students by means of

mandatory advising sessions. During the semester students were required to meet at least three times with an assigned advisor who had access to academic progress reports completed by instructors in English, Math and Reading prior to each advising session. Miller (1985) wrote,

Contrary to expectations that many students would find the monitoring of their classes an invasion of privacy, it was found that students were eager to receive information about their academic progress as reported to their AIMS faculty advisor. It was discovered that students were astonishingly unaware of how they were doing in class, and they were often intimidated about asking their instructors for desired information. Channeling the information through a designated advisor was an extremely effective means of reaching students. (p. 22)

The results from this study indicated that the grade point average for students who completed the AIMS program was almost one full point higher than similar non-participants. The author also administered follow-up evaluations and found that advisors supported the program and students gave the program a positive rating and found that “a formal connection with a knowledgeable advisor helps cut through red tape and makes the college experience a beneficial one” (Miller, 1985, p.22).

Similar to the previous study of the CORE program, the AIMS study demonstrated how an institutional program that purposefully utilizes academic advising, can significantly reduce the student attrition rate. This program involved a greater level of coordination from the AIM advisors and the instructors by requiring the submission of a progress report at three points throughout the semester. In order for this program to be effective, it requires that all parties including students, advisors and faculty share in their commitment to the effectiveness and value of the program. At this institution, the AIMS program was developed from a participatory planning approach, which may have contributed to its acceptance on the campus. However, if this program was implemented on another campus, it may not be as readily accepted and valued. One of the most interesting findings presented by Miller (1985) was the misperception that students would find this approach an invasion of their privacy. Contrary to this assumption, many students were awakened to their true academic progress and appreciated this depth of guidance.

Summary of Advising and Retention Literature

Previous research on the area of academic advising and student retention approached the topic by presenting models of student retention that first establish the components of student integration and describe how advisors can better facilitate the factors that contribute to integration. Researchers also compared students who participated in purposeful advising programs (CORE and AIMS programs) and those who did not participate, and demonstrated the effectiveness of these programs as well as additional consequences of these initiatives.

Based on the review of the literature, it is evident that Tinto's theoretical model has influenced these research studies, yet the significance of contact between a student and an advisor has not been isolated and examined within a retention model. Several researchers (Getzlaf, Sedlacek, Kearney & Blackwell, 1984; Grosset, 1991; Nordquist, 1993) included dimensions of academic advising as measures of student integration, however its presence was peripheral.

For example, Getzlaf, Sedlacek, Kearney and Blackwell (1984) included advisor satisfaction as a variable to assess academic integration. Results from this investigation were general and failed to address the specific contribution of advisor satisfaction to future enrollment behavior. Grosset (1991) requested that students indicate, "the number of times they met with faculty or other college staff, such as academic advisors and counselors, outside of the classroom" (p. 165). Grosset's findings revealed that the quality of interaction with faculty and advisors was associated with persistence. More specifically, interactions perceived as contributing to student growth were identified as influencing retention decisions. Again, interaction with advisors was examined, yet only in the context of faculty and other college staff.

Similarly, Nordquist (1993) utilized qualitative procedures and interviewed students concerning their institutional experiences and the relation to persistence. The interview questions included, "Did you seek assistance from academic advisors?", and "If so, describe your experiences with academic advisors". Student accounts of their experiences described dissatisfaction and the decision to depart from the institution in terms of lack of or negative interaction with faculty and advisors. Despite this significant finding, the link between advising and departure was not addressed again in the report of findings.

A gap exists in the persistence literature concerning the association between student perceptions of academic advising and subsequent enrollment behavior. More specifically, it remains ambiguous whether the perceived effectiveness of the advising process and aspects of the advisee/advisor relationship influence subsequent enrollment behavior. The dynamics between students and faculty, and students and advisors, have also been established within the literature. It is therefore important to assess perceptions of academic advising as potential contributors to students' academic and social integration into the campus climate. Again, it is the perceived quality of affiliation between the student and advisor and its potential link to retention that was the focus of this project.

CHAPTER 3

RESEARCH DESIGN AND PROCEDURES

As previously outlined in Chapters 1 and 2, the purpose of this study was to examine student perceptions of academic advising and determine the relationship between academic advising and student persistence. This investigation employed a post-hoc methodology format and utilized multiple data sources that included student satisfaction survey data, academic performance data and student enrollment records. A series of preliminary statistical analyses evaluated the psychometric quality of the instrument employed in this study. Subsequent methodologies utilized descriptive statistics, one-way ANOVA, independent samples t test, step-wise discriminant analysis, and canonical correlation procedures. This chapter addresses the specific research questions developed for this investigation and describes the quantitative methodological approaches employed to collect and examine the data.

Theoretical Framework

Tinto's (1975) model of student departure was the theoretical framework selected for this research study. According to Tinto, voluntary student withdrawal is an outcome of the interaction between students' entering characteristics, educational commitments, and experiences within the academic and social communities of the institution. Students arrive on campus with existing characteristics and commitment levels to the institution and to the goal of educational attainment. As the student gains experience within the academic and social systems of the institution, commitment levels become modified. The quality of student interactions, measured by perceptions of their experiences, determine the level to which students are integrated into the collegiate environment. Positive perceptions of educational and social experiences are indicators

of integration and predict student persistence. Negative perceptions on the other hand, demonstrate a lack of integration, and increase the likelihood for early departure.

This study employed measures previously established within the retention literature to operationalize the constructs of Tinto's framework. A model was assembled to examine the unique variance of previously established scales (student entering characteristics, measures of academic integration, measures of social integration, and commitment variables) in the prediction of students' future enrollment behavior. Perceptions of academic advising were then added as a new scale within the model, and its contribution to persistence decisions examined.

Research Questions

The following research questions provided the structure for this study.

RQ1: What are students' perceptions of academic advising?

RQ2: Do perceptions of academic advising differ based on the type of advising delivery system (faculty advisor, professional advisor, or peer advisor)?

RQ3: Do departing and returning students differ in their perceptions of academic advising?

RQ4: Do measures of Tinto's conceptual framework contribute to the prediction of students' future enrollment behavior?

RQ5: When added to measures of Tinto's conceptual framework do perceptions of academic advising contribute to the prediction of students' future enrollment behavior?

RQ6: Do perceptions of academic advising function as measures of academic and/or social integration?

Instrumentation

Satisfaction Inventories and Student Retention

Molnar (1996) stated, "A view pervasive in much of the retention research is that student satisfaction is at the core of student retention" (p.2). Juillerat and Shreiner (1996) and the USA Group of Noel-Levitz (1997) discussed the use of student satisfaction instruments as the method to quantify student needs and expectations. Juillerat and Schreiner explained that many

campuses are taking a closer look at their commitment to student-centeredness and these instruments offer critical information. They stated, “If a student perceives the college or university as ineffective, any number of consequences may occur, including, but certainly not limited to, student attrition” (Juillerat & Schreiner, 1996, p. 8). USA Group Noel Levitz (1997) asserted that student satisfaction studies are effective assessment tools that enable institutions to directly identify their strengths and weaknesses. In a survey of 524 institutions currently using student satisfaction inventories, administrators cited the purpose for these assessments. Reasons included: setting their retention agendas, providing feedback to faculty, staff and students, and identifying the specific needs of student subgroups (USA Group Noel-Levitz, 1997). Levitz, Noel and Richter (1999) elaborated and asserted, “Student persistence to the completion of educational goals is a key indicator of student satisfaction and success. Persistence is an individual performance indicator and it is measurable” (p. 31).

Hendel and Tomsic (2000) wrote that more institutions are employing satisfaction surveys as a method for assessing student experiences on campus that contribute to enrollment decisions. These researchers explained that although many institutions hire national consultants to collect information on students’ satisfaction levels, larger institutions with greater institutional research ability often develop and employ surveys internally.

Undergraduate FSU Satisfaction Inventory

In an effort to assess levels of student satisfaction with the institutional environment, the Department of Undergraduate Studies at Florida State University administered the Undergraduate FSU Satisfaction Inventory to undergraduate students in March 2001 and 2002. This instrument measured demographic variables, estimated time participating in activities, and assessed satisfaction with a wide array of institutional experiences. Also included within the survey were specific sections addressing registration, academic advising, liberal studies, major department, academic quality, educational gains, and perceptions of student experiences.

The instrument was developed through the participation of an Assessment Advisory Group, a committee of institutional researchers. It was the second of two instruments administered to students attending the institution. A team of national consultants, hired by the institution to assess institutional climate, administered the first satisfaction inventory. The

results from the first survey provided important information to initiate retention action on the campus, yet institutional administrators considered the data to be insufficient in its generality. In response to the need for more specific data, a team of institutional researchers, led by the Director of Research for the Division of Undergraduate Studies, developed a more comprehensive scale internal to the institution. Items in this instrument included specific terminology that reflected various aspects of the institutional culture. The Undergraduate FSU Satisfaction Inventory and Letter of Informed Consent are presented in Appendices A and B.

Validity and Reliability of the Instrument

Validity

According to Hardtck and Petrinovich (1976), a valid measurement is one that measures what it is supposed to measure. Crocker and Algina (1986) elaborated on this basic definition and explained three primary types of validation: content validity, criterion-related validity and construct validity. Content validity is the level that the actual instrument items represent what the test was designed to measure. Predictive or criterion-related validation is the level that the test results can accurately predict future outcome of the same behavior by different individuals. Construct validity is the extent that individual items can be classified to measure a particular construct (Crocker and Algina, 1986). Rymarchyk (2000) added that social science researchers often include a fourth component of validity, face validity. Face validity is the level to which the instrument appears relevant to the construct that is being addressed by the instrument (Rymarchyk, 2000). Face validity is best established with the population being studied.

The Undergraduate FSU Satisfaction Inventory FSU was previously subjected to face validity and content validity procedures. To establish face validity, a group of freshman enrolled in the First Year Experience course in Fall, 1999 served as a pilot group and completed the instrument. A subgroup of 7 students met individually with the Director of Research for the Division of Undergraduate Studies and expressed their understanding and interpretation of each survey item. Content validity was established by the Assessment Advisory Group, a panel of institutional professionals committed to the successful development and implementation of the FSU Student Satisfaction Inventory. The team addressed each survey question and collectively

reached consensus on the meaning of each item. These procedures were conducted at a general level and did not include any analysis of underlying factor structures.

Construct Validity using Factor Analysis

For the purpose of this study the items representing student perceptions of academic advising underwent construct validation. When the indicator is expressed in terms of multiple items of an instrument, exploratory factor analysis is the method selected for construct validation (Yu, 2000). It is the statistical approach used to analyze interrelationships among a large number of variables and to explain these variables in terms of their common underlying dimensions (Trochim, 2002). Fruchter (1968) elaborated and explained that a series of item scores are inter-correlated to determine the number of dimensions the test space occupies and to identify these dimensions in terms of traits or other general concepts. Factor analysis is performed in two steps; the first is to determine the number of existing constructs based on a pre-established eigenvalue. The second step involves the rotation of factors.

Past research on academic advising indicated that the practice of academic advising is often separated into distinct approaches or functions. Crockett (1985) identified developmental and prescriptive advising as two different approaches to advising. Prescriptive advising is limited to relaying information whereas developmental advising is a process involving all aspects of students' personal and educational lives.

Other researchers within the academic advising field (Beasley-Fielstein, 1986; Fago, 1995; Frost, 1991; Pettress, 1996; Wade & Yoder, 1995) addressed the separate functions of academic advisors. These included the advisor as the conveyor of information regarding university requirements, rules and procedures (Pettress, 1996). The second function included the advisor as the institutional referral agent (Beasley-Fielstein, 1986; Pettress, 1996). This role involves assessing students' needs and making referrals to adjunct institutional services such as tutoring, psychological counseling, financial aid or career counseling. The final advising function discussed within the literature is that of student mentor. This role involves establishing and sustaining empathy and trust, while focusing on the student's individual needs (Wade & Yoder, 1995).

Exploratory factor analysis revealed whether the presence of advising dimensions or constructs existed within the 13 items comprising the academic advising scale. The results indicated the academic advising scale as unidimensional, with one global academic advising factor accounting for 55.739% of the variance. Results are presented in Table 1. A scree plot supported the uni-dimensionality of the scale.

Table 1

Factor Analysis Results for the Academic Advising Scale (N=3943)

Factor	Eigenvalue	% of Variance	Cummulative %
1	7.246	55.739	55.739
2	.960	7.388	63.126

Reliability

Reliability is the consistency of a measurement, or the degree to which an instrument measures the same way each time it is used under the same condition with the same subjects (Trochim, 2002). Crocker and Algina (1986) discussed reliability as the degree to which individuals' standard scores remain relatively consistent over repeated administration of the same test or alternate forms of the test. According to Trochim (2002), there are two ways that reliability is normally estimated, through the test/retest method and the demonstration of internal consistency.

The Undergraduate FSU Satisfaction Inventory has been administered to students from 1999 to 2002. The consistency of mean scores and standard deviations of test items reveal stability of the instrument, yet formal reliability procedures have not been previously conducted. For the purpose of this research study, reliability measures were established through the test/retest method and through internal consistency measures of the four scales used in this study.

Test-Retest Reliability Rating

The test/retest procedure involves three components: 1) the instrument must be implemented at two separate times for each subject, 2) the correlation between the two separate measurements are computed, and 3) it is assumed that there is no change in the underlying condition between test 1 and test 2 (Trochim, 2002).

In order to estimate the reliability of the FSU Undergraduate Satisfaction Inventory a test/retest procedure was conducted. The survey was administered to a group of 51 students enrolled in EDF 4214, an upper-division introductory research methods course. The surveys were distributed in class and students were given an unrestricted amount of time to complete the instrument. Thirty days later, the survey was administered in the same class to the same group of students. Forty students completed both administrations of the survey, as 11 students were absent for either administration.

Due to the large volume and varied data comprising the FSU Student Satisfaction Inventory, test-retest analyses were conducted for each of ten sections comprising the instrument. Segments included the estimated time spent participating in activities, satisfaction with university office/program services, satisfaction with university office/program staff, registration, academic advising, liberal studies, the student's major, academic quality, educational gains, and general experiences.

Cases without completed data for each item within the survey section were excluded from the analysis. In the event that a student marked N/A or "did not use this office or program", it was coded as missing data. As a result, the number of cases included within each segment analysis varied considerably. The amount of missing data for two sections, satisfaction with university office/program services and satisfaction with university office/program staff prohibited the completion of the reliability analysis.

Table 2 provides the Equal-length Spearman-Brown reliability coefficient for each instrument section and the number of cases included for the analysis. These results revealed highly correlated pre-test and post-test measures.

Table 2*Test-Retest Spearman Brown Reliability Coefficients (N=40)*

Segment	N of Cases	N of Items	R Coefficient
Time	36	24	.8835
Registration	13	22	.7183
Advising	9	40	.9045
Major	17	24	.9270
Liberal Studies	19	14	.7722
Gains	13	34	.7939
Quality	23	22	.7343
Experience	25	28	.8286

Internal Consistency Reliability Rating

Internal consistency, the second method for estimating reliability, is obtained by grouping items within a survey that measure the same concept (Trochim, 2002). Cronbach's alpha is the measurement reflecting how well a set of items (or variables) quantify a single unidimensional latent construct, and is based on the mean or average correlation of each item in the scale with every other item (Morgan & Griego, 1998). According to these researchers it is the most commonly used type of internal consistency reliability. Green, Salkind and Ackey

(2000) explained that the greater the consistency in responses among items, the higher the coefficient alpha.

In order to construct the model for this study, items were selected from the Undergraduate FSU Satisfaction Inventory to build scales representing constructs of Tinto's (1975) model of student departure. These scales included academic integration, social integration, commitment and academic advising. Items were selected based on their equivalency to previously established measures within the literature on student persistence and academic advising. A panel of three advising professionals reviewed and confirmed the scale designation. To measure internal consistency, Cronbach's alpha reliability test was applied to each scale.

Academic Integration Scale

The internal consistency estimate of reliability for the academic integration scale evaluated the following items: 1) In the majority of my liberal studies courses, instructors are capable teachers, 2) In the majority of my liberal studies courses, instructors are enthusiastic about the course material, 3) Faculty in my major are concerned about my academic/career development; 4) Faculty are willing to meet with me outside of class to discuss course-related topics, 5) Faculty are willing to meet with me outside of class to discuss non-course related topics, 6) At this time, I am satisfied with my major, 7) Academic quality is a high priority of the faculty at FSU, 8) The student environment at FSU emphasizes academics, 9) Most of my classes are intellectually challenging, 10) Based on my experiences, I have found FSU to be a strong academic institution, 11) the amount of time spent during a typical week studying or doing homework. Item 11 was excluded as a result of scale incompatibility. For the remaining 10 items, the internal consistency reliability analysis revealed an alpha coefficient value of .8260.

Social Integration Scale

The second internal consistency estimate of reliability was computed for the social integration scale. The alpha value was computed for the following items: 1) I have sufficient opportunity to participate in social, cultural, and athletic activities at FSU, 2) I have sufficient opportunity to meet and get to know people from different backgrounds, 3) I experience a sense of belonging here at FSU, and 4) FSU is a very friendly campus, 5) time spent during a typical week socializing with friends, 6) time spent participating in student/clubs organizations, 7) time

spent talking with instructors outside of class, 8) students level of growth from college experiences outside the classroom, and 9) growth from on-campus residential experiences. Items 5 through 9 were excluded as a result scale incompatibility. The internal consistency reliability analysis for the remaining items revealed an alpha coefficient of .7907.

Commitment Scale

Item analyses were conducted on the four items reflecting student commitment levels; 1) Overall I am satisfied with my college experiences at FSU, 2) FSU meets my expectations for the overall college experience, 3) If I had to start all over again, I would still attend FSU, and 4) when selecting a college, FSU was my first, second, third or less than third choice. Item 4 was eliminated due to its incompatibility with the remaining commitment scale items. The internal consistency estimate of reliability for the commitment scale revealed an alpha reliability rating of .8770.

Academic Advising Scale

The fourth and final analysis of internal consistency reliability was applied to the academic advising scale. The following items were included: 1) The university keeps me informed about who my advisor is, 2) My academic advisor is knowledgeable about liberal studies/university-wide requirements, 3) My academic advisor is knowledgeable about my major requirements, 4) My academic advisor encourages me to meet with them regularly, 5) My academic advisor assists me in planning my schedule and selecting my courses, 6) My academic advisor helps me understand university policy and procedures, 7) My academic advisor helps me understand my academic standing (warning, probation, dismissal, good academic standing), 8) I have received misinformation from my academic advisor (reversed), 9) My academic advisor helps me match my academic abilities with potential majors, 10) My academic advisor assists me with career planning, 11) My academic advisor refers me to other offices for services when necessary, 12) My advisor is easy to talk to, 13) My academic advisor is available when I need help. Each of the 13 items was retained for the academic advising scale. The alpha coefficient value for this scale was .9255. Table 3.6 presents the reliability findings for each of the four scales.

Table 3

Cronbach's Alpha Reliability Ratings

Scale	Cronbach's Alpha Coefficient
Academic Integration	.8260
Social Integration	.7907
Commitment	.8770
Academic Advising	.9255

Population

The population examined in this study was undergraduate students attending Florida State University during the 2000-2001 and 2001-2002 academic years. Florida State University is a four-year, Research I, Tier II, traditional public institution. In Fall 2000 the enrollment at the institution included 34,477 students. The undergraduate population comprised 26,422 or 76.64% of the total student population (FSU Fact Book, 2001).

Sample Selection

Undergraduate FSU Satisfaction Inventory Sample

The Division of Undergraduate Studies administered the Undergraduate FSU Satisfaction Inventory during the 2001 and 2002 Spring semesters. For both administrations, all freshman and a random sample of sophomore, junior and senior students were invited to participate in a study to assess perceptions of student life. Students were contacted through their campus email

accounts and attached to the invitation was the Internet address to access the survey. For the 2001 administration, students who did not have a registered email account with the university were mailed a paper copy of the survey and a pre-paid return envelope. In 2002 the university required all students to have a registered email account with the university and consequently discontinued the paper administration.

In 2001, 2659 surveys were returned out of the 11,066 that were administered, reflecting a 24 % return rate. In 2002, 18 % of surveys were completed; 1838 surveys were returned out of the 10,161 that were administered. For both administrations, freshman students comprised approximately 30% of those who completed the instrument. The 2001 sample consisted of 2305 student participants and the 2002 sample 1687 participants. Forty-nine cases were identified as duplicate cases and subsequently omitted from the sample. In the event that duplicate data was observed, the case containing the most completed data was maintained within the dataset. The final combined 2001-2002 FSU Undergraduate Satisfaction Inventory sample consisted of 3943 cases.

First Time in College Students Subset Sample

It has been established within the retention literature (Baumgart & Johnstone, 1977; Pascarella & Terenzini, 1979; 1980) that the greatest risk for voluntary attrition is between the freshman and sophomore year. Levitz, Noel and Richter (1999) substantiated this period as the most critical due to its direct influence on subsequent attrition rates. According to these retention scholars, the first year is the pivotal year, since attrition rates are typically halved each succeeding year after the first year. They explained that the sophomore to junior year attrition rate is half that of the freshman to sophomore rate, and the junior to senior rate is halved again. Consequently, Levitz, Noel and Richter reiterated the focus on the freshman year as the target year when approaching student attrition problem. For the purpose of this study, data from freshman students were examined when addressing the research questions pertaining to persistence.

To examine the relationship between perceptions of academic advising and freshman student persistence, a second data set was constructed. The Division of Undergraduate Studies at Florida State University furnished information for all FTIC students who enrolled in the Summer

and Fall 2000 and 2001 semesters. This data set included social security numbers, gender, high school grade point averages, verbal and quantitative SAT scores, grade point average at the end of the freshman year, and freshman to sophomore enrollment status.

The new set of data was built by matching FTIC matriculants from 2000 and 2001 with the FSU Undergraduate Satisfaction Inventory sample. Matching was completed through student social security numbers. The 2000 Undergraduate Studies data set consisted of demographic and enrollment information for 5758 freshman students. Eight hundred eighty nine students matched the 2001 FSU Undergraduate Satisfaction survey sample. The 2001 Undergraduate Studies data set consisted of information for 5780 freshman students. One thousand one hundred seventy-six matched the 2002 FSU Undergraduate Satisfaction survey sample. One student had been academically dismissed from the university and was thus excluded from the sample. The matching process resulted in a 2001-2002 combined FTIC data set of 2064 student participants comprising demographic and academic information, student perceptions of their institutional experiences, and first to second year enrollment status.

Permission to access all data was granted by the Dean of Undergraduate Studies. Letters of permission are presented in Appendix C and D. Approval to complete this study was authorized by the Florida State University Institutional Review Board for Research Involving Human Subjects. The approval letter is presented in Appendix E.

Analysis of Research Questions

Descriptive and inferential statistics were used to analyze the data for this investigation. The data were obtained through the Division of Undergraduate Studies and the Office of the Registrar, and analyzed using Statistical Package for the Social Sciences (SPSS) version 10.0. Specific statistical approaches for each research question are addressed.

Research Question One

What are students' perceptions of academic advising?

In order to assess general patterns of student perceptions of academic advising, means and standard deviations were calculated. Data were analyzed for the full FSU Undergraduate

Satisfaction Inventory dataset (N=3943). Each of the 13 items comprising the Academic Advising scale (listed on page 5 of the instrument) was examined. Responses were ranked by mean scores and analyzed by determining relative satisfaction and dissatisfaction with different aspects of the academic advising experience measured by the 13 items.

Research Question Two

Do perceptions of academic advising differ based on the type of advising delivery system (faculty advisor, professional advisor, or peer advisor)?

H₀: There is no group difference in perceptions of academic advising among three delivery systems: faculty advisor, professional advisor or peer advisor.

One-way ANOVA was the statistical method employed to address this question. For this research question, data were analyzed for the full FSU Undergraduate Satisfaction Inventory dataset (N=3943). The independent variable, type of advising delivery system, is a categorical variable. The three comparison groups are faculty advisor, professional advisor, or peer advisor. The dependent variable, student perceptions of academic advising, was a summated score based on the 13 academic advising items addressing students' experiences with their primary academic advisor, listed on page five of the instrument.

Research Question Three

Do departing and returning students differ in their perceptions of academic advising?

H₀: There is no group difference between returning and departing students in regard to perceptions of academic advising.

An independent samples t test was the statistical analysis employed to address this research question. Data from freshman student participants (N=2064) were analyzed for this question. The independent variable, enrollment status, is a dichotomous variable. Each participant's enrollment status was reported by the Florida State University Division of Undergraduate Studies and identified as a member of either the returning or departing group. The dependent variable, student perceptions of academic advising was compared both at the item level and scale level, measured by a summative score of the 13 academic advising items. The

means for each group was then evaluated to determine whether departing and returning students differed in their perceptions of academic advising.

Research Question Four

Do measures of Tinto's conceptual framework contribute to the prediction of students' future enrollment behavior?

H0: There is no multivariate discriminant effect between groups of returning and departing students in regard to measures of Tinto's conceptual framework.

Discriminant analysis procedures were utilized to determine the effectiveness of the variable sets in correctly classifying persisting and withdrawing students. Data from freshman student participants (N=2064) were analyzed for this question. For this question, the independent variables included measures of Tinto's conceptual framework: entering characteristics, academic integration, social integration and commitment. The dependent variable was group membership (returning or departing) based on students' enrollment status (returning or departing students). The discriminant analysis revealed the amount of explained variance each scale separately and collectively contributed to the identification of departing and returning student groups.

Research Question Five

When added to measures of Tinto's conceptual framework do perceptions of academic advising contribute to the prediction of students' future enrollment behavior?

H0: There is no multivariate discriminant effect between groups of returning and departing students in regard to perceptions of academic advising when added to measures of Tinto's conceptual framework.

Discriminant analysis procedures were utilized to determine the effectiveness of the academic advising variable set in correctly classifying returning and departing students. Data from freshman student participants (N=2064) were analyzed for this question. Question five added perceptions of academic advising as an additional independent variable set to the existing independent variables examined in the previous research question. The dependent variable for this question was group membership (returning or departing) based on students' registration

status. The discriminant analysis revealed the amount of explained variance that each scale separately and collectively contributed to the identification of departing and returning student groups.

Research Question Six

Do perceptions of academic advising function as measures of academic and/or social integration?

H₀: There is no relationship between measures of academic advising and measures of academic and/or social integration.

Question six serves as an exploratory question. In past attrition research, student perceptions of academic advising have been included as indirect measures of student integration. It was the intention of this researcher to examine whether perceptions of academic advising could be statistically demonstrated as measures of student integration.

For this purpose, canonical correlation procedures were employed to determine the shared variance between scale items measuring student perceptions of academic advising (independent variable) with measures of academic and social integration (dependent variables). Data from freshman student participants (N=2064) were analyzed for this question. Canonical correlation was defined by Hair, Anderson, Tatham and Black (1998) as a multivariate statistical model that facilitates the study of interrelationships among sets of multiple dependent variables and multiple independent variables. The authors described canonical correlation analysis as the most appropriate and powerful technique used in research designs when examining multiple dependent and independent variables.

CHAPTER IV

RESULTS AND ANALYSIS OF DATA

This study was designed to examine student perceptions of academic advising and explore a potential link between perceptions of academic advising and student retention. Preliminary statistical analyses explored broad perceptions of academic advising using the Undergraduate FSU Satisfaction Inventory data set. Descriptive statistical analyses presented general information regarding students' opinions of academic advising. A one-way ANOVA test compared students' perceptions of academic advising based on the type of delivery system: professional academic advisor, faculty advisor or peer advisor.

Corresponding analyses were conducted to study the link between academic advising and student persistence. Tinto's (1975) theory of student departure guided the methodological approach selected for this study. A model was generated using previously validated measures of Tinto's conceptual framework to predict future enrollment behavior. Student perceptions of academic advising were then added to the enrollment prediction model to investigate the contribution to students' enrollment behavior. In order to assess the relationship between academic advising and student retention, data from a freshman student subset of the Undergraduate FSU Satisfaction Inventory sample were examined. Incorporated into this data set were achievement and enrollment information. Independent samples t-tests were performed to judge group differences between returning and departing students concerning their perceptions of academic advising. To classify students into enrollment groups based on measures previously associated with student persistence, discriminant analysis procedures were conducted. Student perceptions of academic advising were subsequently introduced as a new scale and its contribution evaluated using discriminant analysis. Mediating effects of gender, race/ethnicity, and academic aptitude were also assessed. Final analyses utilized canonical correlation procedures to explore potential relationships between the academic advising and academic and

social integration scales. Statistical findings generated by the six research questions are presented.

Purpose Statement

The purpose of this study was to examine student perceptions of academic advising and determine the relationship between academic advising and student persistence.

Demographic Description of the FSU Satisfaction Inventory Sample

The FSU Satisfaction Inventory sample comprised 1962 freshman students (49.9%), 629 sophomores (16%), 662 juniors (16.8%), 669 seniors (17%), and 6 non-classified students (.2%), categorized as special students by the institution. Fifteen (.4%) students did not complete this survey item. This data is presented in Table 4.

Table 4

Demographic Characteristics of the Sample by Year (N=3943)

Year	N	Percentage of Sample
Freshman	1962	49.8%
Sophomore	629	16.0%
Junior	662	16.8%
Senior	669	17.0%
Special Students	6	.2%
Missing Item	15	.4%
Total	3943	100.0%

Students' enrollment status indicated that 3710 students (94.1%) were enrolled full-time at the university. Part-time students numbered 215 (5.5%), and 18 students (.5%) did not complete the enrollment item in the survey. Six hundred ninety-five students (17.6%) identified themselves as having transferred from another institution. The enrollment data is presented in Table 5.

Table 5

Demographic Characteristics of the Sample by Enrollment Status (N=3943)

Enrollment	Frequency	Percentage of Sample
Full-time	3710	94.1%
Part-time	215	5.5%
Missing Item	18	.5%
Total	3943	100.0%

The gender composition of the sample included 2581 female students (65.5%) and 1343 male students (34.1%). Nineteen students (.5) did not complete the gender response. The gender data is presented in Table 6.

Table 6*Demographic Characteristics of the Sample by Gender (N=3943)*

Gender	N	Percentage of Sample
Female	2581	65.5%
Male	1343	34.0%
Missing Item	19	.5%
Total	3943	100.0%

The race/ethnicity composition of the survey respondents was divided into the following groups: Caucasian, 3001 (76.1%), African–American, 442 (11.2%), Hispanic American, 371 (9.4%), Native American, 41 (1.0%), Asian-American, 134 (3.4%), Pacific Islander, 16 (.4%), and Other, 89 (2.3%). One hundred sixty-five students selected more than one race as their ethnic identity. This information is presented in Table 7.

Table 7*Demographic Characteristics of the Sample by Ethnicity (N=3943)*

Ethnicity	N	Percentage of Sample
Caucasian	3001	76.1%
African American	442	11.2%
Hispanic	371	9.4%
Asian	134	3.4%
Pacific Islander	16	.4%
Native American	41	1.0%
Missing Item	34	.9%
Other	89	2.3%
Total	4094	104.7%

Note. The total percentage of 104.7% reflects the number of respondents who selected more than one ethnicity group to describe themselves.

Every school and college at the institution was represented in this sample. The following colleges comprised the following numbers and percentages of student participants: the College of Arts and Sciences, 703 (17.8%), the College of Business, 627 (15.9%), the College of Social Sciences, 268 (6.8%), the College of Communication, 253 (6.4%), the College of Education 213

(5.4%), the College of Human Sciences 172 (4.4%), School of Criminology and Criminal Justice, 145 (3.7%), College of Engineering, 121 (3.1%) School of Music, 107 (2.7%), School of Visual Arts and Dance, 78 (2.0%), School of Nursing, 72 (1.8%), School of Information Studies, 69 (1.7%), and School of Motion Picture, Television, and Recording Arts, 20 (.5%). Five hundred eighty-six students (14.9%) identified themselves as undecided students and 418 (10.6%) of the participants did not select a college affiliation. The data are presented in Table 8.

Table 8

Sample Composition by College (N=3943)

College	N	Percentage of Sample
Arts and Sciences	703	17.8%
Business	627	15.9%
Social Sciences	268	6.8%
Communication	253	6.4%
Education	213	5.4%
Human Sciences	172	4.4%
Criminology	145	3.7%
Engineering	121	3.1%
Music	107	2.7%
Visual Arts and Dance	78	2.0%
Nursing	72	1.8%
Information Studies	69	1.7%
Theater	53	1.3%
Social Work	38	1.0%

Table 8 Continued

College	N	Percentage of Sample
Undecided	586	14.9%
Missing Item	418	10.6
Total	3943	100.0%

The demographic composition of the FTIC sample demonstrated a similar composition to the Undergraduate FSU Satisfaction Inventory sample in regard to race/ethnicity, gender, full-time vs. part-time enrollment, and college representation. Demographic information pertaining to the enrollment analyses of the FTIC subset group, is reported in Table 9.

Table 9*FTIC Sample Academic Measures (N=2064)*

Variable	M	SD
High School GPA	3.654	.5067
Spring Semester GPA	3.020	.6651
Combined SAT Scores	1126.88	127.712
Verbal SAT Scores	565.53	72.861
Math SAT Scores	561.35	74.080

Research Questions

Research Question One

What are students' perceptions of academic advising?

In order to assess general patterns of student perceptions of academic advising, means and standard deviations were calculated utilizing the first data set of 3943 FSU Satisfaction Instrument respondents. Scores ranged from 1 to 5: 1) strongly agree, 2) agree, 3) disagree, 4) strongly disagree, and 5) N/A. If N/A was the selected response, the item was coded as missing data and excluded from the analysis.

The mean scores for the advising items ranged from highest score of 1.66 (My advisor is knowledgeable about my major requirements) to the lowest score of 2.87 (My advisor helps me match my academic abilities with potential majors). The means and standard deviation scores for each of the 13 items are reported in Table 10.

Table 10

Means, Standard Deviations and Percentage of Participants Who Disagreed with Academic Advising Items (N=3943)

Advising Item	M	SD	% Disagreed or Strongly Disagreed
Advise 3 My AA is knowledgeable about my major requirements.	1.66	.697	5.1
Advise 12 My AA is easy to talk to.	1.84	.770	8.8
Advise 2 My AA is knowledgeable about liberal studies requirements.	1.87	.765	9.3
Advise 13 My AA is available when I need help.	1.98	.788	11.7

Table 10 Continued

Advising Item	M	SD	% Disagreed or Strongly Disagreed
Advise 11 My AA refers me to other offices and services.	2.04	.774	11.7
Advise 8 I have received misinformation from my AA (Reversed)	2.05	.906	14.6
Advise 5 My AA assists me in planning my schedule.	2.06	.833	16.1
Advise 10 My AA assists me with career planning.	2.13	.803	13.4
Advise 7 My AA helps me understand my academic standing.	2.20	.885	18.2
Advise 6 My AA helps me understand university policies.	2.26	.847	21.3
Advise 4 My AA encourages to meet with them regularly.	2.36	.950	29.1
Advise 9 My AA helps me match my academic abilities.	2.37	.876	21.8
Advise 1 The university keeps me informed about who my AA is.	2.37	.918	30.0

*Scale: 1=Strongly Agree, 2=Agree, 3=Disagree, 4=Strongly Disagree

A comparative analysis of advising items reveals important information concerning the strengths of the advising system on this campus, as well as areas of concern requiring institutional attention. Participants in this study were satisfied with the advisors' knowledge level, ease in communicating and the accuracy of information received. Areas identified as needing improvement included the extent to which the university keeps the students informed of

the identification of their advisor, the degree to which the advisors encourage regular advising sessions and the level advisors assist students with matching their abilities with potential majors.

Research Question Two

Do student perceptions of academic advising differ based on advising delivery system (faculty advisor, professional advisor or peer advisor)?

A one-way ANOVA was conducted to assess the relationship between the type of advising delivery system and students' perceptions of academic advising. The null hypothesis predicted no difference among groups in perceptions of academic advising based on the type of delivery system. This analysis was completed utilizing the full FSU Satisfaction Inventory sample. The independent variable, advising delivery system, involved three forms of academic advising: professional advisor, faculty advisor and peer advisor. The dependent variable for this analysis was a summated score of the academic advising items. Statistically significant differences were observed ($p < .05$) among the three groups. Results for this analysis are reported in Table 11.

Table 11

ANOVA Comparing Mean Advising Scores Based on Advising Delivery System (N=3943)

Advisor Type	M	N	SD
Professional Advisor	1.9369	1492	.53909
Faculty Advisor	2.1183	627	.62868
Peer Advisor	2.4136	146	.69815

Table 11 Continued

	SS	Df	MS	F	P
Between Groups	38.965	2	19.483	58.650	.000**
Within Groups	751.403	2262	.332		
Total	790.368	2264			

Scale: 1=Strongly Agree, 2=Agree, 3=Disagree, 4=Strongly Disagree

** $p < .01$

A Dunnett C post hoc test, a test that does not assume equal variances among the three groups (Green, Salkind and Akey, 2000), was conducted to evaluate pairwise differences among the group means. To take into account the risk of family-wise error, the alpha level was adjusted using the Bonferroni correction formula ($p < .016$). Professional advisors received the highest ratings followed by faculty advisors. Students were least satisfied when the peer advisor was selected as the primary advisor. The three pairwise comparisons demonstrated statistically significant mean differences ($p < .05$). Results for this analysis are reported in Table 12.

Table 12

Effect Sizes Between Groups of Advisors

Group	PR AD	FA AD	PE AD	d	r^2	MD
	***	***		.310	.02	*
	***		***	.764	.13	*
		***	***	.444	.05	*

*The mean difference is significant at the .05 level.

Research Question Three

Do departing and returning students differ in their perceptions of academic advising?

The null hypothesis for this analysis predicted no significant difference between returning and departing students with regard to perceptions of academic advising. An independent samples t-test was conducted using the FTIC data set to compare differences between departing and returning students in their perceptions of academic advising. The sample sizes of the returning and departing students differed considerably, posing a threat to the power of the analysis. The group of returning students consisted of 1882 cases and the non-returning students, 182 cases. In order to remedy this discrepancy, a random sample was selected from the returning student group to match the non-returning N. The alpha level was adjusted using the Bonferroni correction formula to take into account the risk of family-wise error. Individual analyses were performed using an independent samples t-test, revealing no significant differences ($p < .004$) between groups of returning and departing students for each of the thirteen academic advising items. The data are presented in Table 13.

Table 13

Independent Samples T Tests Comparing Mean Advising Scores Based on Enrollment Groups

Variable	Group	N	M	SD	t	P
Advise 1	Returning	135	2.35	1.024	.460	.646
Advise 2	Departing	136	2.29	.904	-.580	.562
	Returning	120	1.78	.758		
Advise 3	Departing	113	1.84	.751	.693	.489
	Returning	120	1.66	.728		
	Departing	111	1.59	.666		

Table 13 Continued

Variable	Group	N	M	SD	t	P
Advise 4	Returning	123	2.33	.945	.688	.492
Advise 5	Departing	117	2.24	.988	-.837	.403
	Returning	121	1.95	.902		
Advise 6	Departing	115	2.04	.799	-1.302	.194
	Returning	113	2.13	-1.302		
Advise 7	Departing	111	2.28	.822	-.359	.720
	Returning	112	2.20	.359		
Advise 8	Departing	104	2.24	.887	-.429	.668
	Returning	114	2.98	.902		
Advise 9	Departing	111	3.04	.972	.351	.726
	Returning	97	2.34	.923		
Advise 10	Departing	98	2.30	.840	.455	.650
	Returning	106	2.10	.915		
Advise 11	Departing	98	2.05	.737	-.185	.854
	Returning	101	2.00	.849		
Advise 12	Departing	96	2.02	.725	-.425	.671
	Returning	122	1.83	.830		
Advise 13	Departing	116	1.87	.717	-.153	.878
	Returning	123	1.98	.873		
	Departing	116	1.99	.716		

A subsequent analysis was completed comparing groups based on a summated score of the 13 academic advising items. This summated score analysis revealed no multivariate discriminating effect between the groups of returning and departing students. Results from this analysis are presented in Table 14.

Table 14*Independent Samples T Test Comparing Summated Mean Advising Scores*

Enrollment Group	M	SD	t	P
Returning	22.370	10.2914	.978	.329
Departing	21.1857	9.88392		

Research Question Four

Do measures of Tinto's conceptual framework contribute to the prediction of students' future enrollment behavior?

The null hypothesis stated there was no multivariate discriminant effect between groups of departing and returning students with regard to the constructs of Tinto's model. To determine whether the three independent variables, academic integration, social integration, and commitment could predict student enrollment, a discriminant analysis was conducted. Summated measures of items comprising the three scales served as the predictor variables. Due to a substantial amount of missing data, summated scores were included if at least 50% of the scales' items were complete per case. The criterion variable was measured by membership in one of two groups, students who returned for their sophomore year at the institution and students who departed following their freshman year. Student entering characteristics of gender, ethnicity, SAT scores and high school GPA were included as independent variables in order to evaluate the presence of mediating effects.

Complete data were unavailable for 1151 cases. The multiple discriminant analysis revealed the overall Wilks' lambda as .990, $x^2(9, N=913)=9.306, p=.410$. The discriminant function had an eigenvalue of .010 and a canonical correlation of .101. Consequently, 1% of the

variability of the scores for the first discriminant function was accounted for by differences between the two groups of returning and non-returning students. Test results indicated no significant multivariate discriminant effect ($p < .05$) between groups of departing and returning students with respect to the dimensions of Tinto's model, measured in this study by the seven predictor variables. Results are presented in Table 15.

Table 15

Discriminant Analysis Utilizing Tinto's Constructs

Eigenvalue	Canonical Correlation	Wilks Lambda	Chi Square	P
.101	.101	.990	9.306	.410

Research Question Five

When added to measures of Tinto's conceptual framework do perceptions of academic advising contribute to the prediction of students' future enrollment behavior?

The null hypothesis for this analysis predicted no multivariate discriminant effect between groups of departing and returning students with regard to perceptions of academic advising when added to the constructs of Tinto's model. To determine the contribution of academic advising perceptions to the prediction of student enrollment, the advising scale was added to the first set of independent variables (academic integration, social integration and commitment), and the second discriminant analysis was conducted. Summated measures of items comprising the four scales served as the predictor variables. Due to a substantial amount of missing data, summated scores were included if at least 50% of the scales' items were complete per case. The criterion variable was measured by membership in one of two groups, students who returned for their sophomore year at the institution and students who departed following their freshman year.

The multiple discriminant analysis revealed the overall Wilks' lambda as .998, $x^2(10, N=803) = 9.459, p=.844$. The discriminant function had an eigenvalue of .012 and a canonical correlation of .109. Consequently, 1% of the variability of the scores for the first discriminant function was accounted for by differences between the two groups of returning and non-returning students. The academic advising variable increased the canonical correlation value by .008, and thus minimally to the differentiation between the two groups of returning and departing students. The results from this analysis are reported in Table 16.

Table 16

Discriminant Analysis Results Utilizing Tinto's Constructs and Academic Advising Scale

Eigenvalue	Canonical Correlation	Wilks Lambda	Chi Square	P
.002	.040	.998	1.404	.844

Research Question Six

Do perceptions of academic advising function as measures of academic and/or social integration? The null hypothesis predicted no statistically significant relationships between the predictor domain, academic advising and the criterion domains, academic integration and social integration.

Canonical correlation procedures were employed to determine the shared variance between items measuring academic advising (independent variable) with measures of academic and social integration (dependent variables).

Academic Advising and Academic Integration Domains

Thirteen variables were used to describe the academic advising domain (Set One) and 10 items were used to describe the academic integration domain (Set Two). The analysis involved

the derivation of canonical functions, the relationship measured between the two canonical variates, defined as the linear composites of the variables comprising each set.

The solution identified three significant canonical correlations ($p < .05$). The magnitude of the relationships between the pairs of variates, demonstrated by the canonical correlation coefficients, ranged from .519 to .310. The eigenvalues and associated statistics for the test of the canonical solution are presented in Table 17.

Table 17

Canonical Correlation Between Academic Advising and Academic Integration Scales

Rc	Wilk's Lambda	Chi Square	df	P
.519	.437	257.336	130	.000**
.381	.598	159.855	108	.001*
.310	.700	111.054	88	.049*

** $P < .01$, * $p < .05$

Using a cutoff of $|\ .35|$, the standardized canonical coefficients within the two domains that correlated with the first canonical root were Advise 13 (My advisor is available when I need help), Major 6 (Faculty in my major are concerned about my academic/career development), and Qual 3 (The student environment at FSU emphasizes academics). This factor can be viewed as a global factor indicating the presence of a general relationship between the academic advising and academic integration variable sets.

The second significant canonical root was analyzed through an examination of the standardized canonical coefficients. Utilizing the $|\ .35|$ cutoff correlation, the variables demonstrating correlations included Advise 2 (My academic advisor is knowledgeable about liberal studies/university requirements), Advise 5 (My academic advisor assists me in planning my schedule and selecting my courses), Advise 6 (My academic advisor helps me understand university policy and procedures, Advise 9 (My academic advisor helps me match my academic

abilities with potential majors), Advise 10 (My academic advisor assists me in career planning), Advise 11 (My academic advisor refers me to other offices or services when necessary), Lib Stud 5 (In the majority of my liberal studies courses instructors are capable teachers), Major 6 (Faculty in my major are concerned about my academic/career development), Major 9 (Faculty are willing to meet with me outside of class to discuss course related topics), Major 10 (Faculty are willing to meet with me to discuss non-course topics), and Qual 10 (Based on my experiences I have found FSU to be a strong academic institution). These weighted items can be interpreted as a relational factor as they address the perceptions of advisors and faculty within an interpersonal capacity.

The third significant canonical root was also analyzed by the group of standardized coefficients that loaded on at or greater than the $|\cdot 35|$ cutoff level. The items within this grouping included Advise 1 (The university keeps me informed of who my advisor is), Advise 2 (My academic advisor is knowledgeable about liberal studies/university wide requirements), Advise 6 (My academic advisor helps me understand university policy and procedures), Advise 7 (My academic advisor helps me understand my academic standing (*warning, probation, dismissal, good academic standing), Advise 13 (My academic advisor is available when I need help), LibStd 5 (In the majority of my liberal studies courses, instructors are capable teachers), Libstd 6 (In the majority of my liberal studies courses instructors are enthusiastic about the course material), Major 10 (Faculty are willing to meet with me outside of class to discuss non-course topics), Qual 1 (Academic quality is a high priority of the faculty at FSU), Qual 10 (Based on my experiences I have found FSU to be a strong academic institution). These items can be interpreted as an informational factor as they collect around the dissemination of information. The interpretation of each canonical root was conducted at the construct level. Item level interpretation was not possible for this analysis due to inconsistent correlation directions. A summary of these findings is presented in Table 18.

Table 18*Standardized Coefficients for the Canonical Correlation Examining Academic Advising and Academic Integration Domains*

	Factor I Global	Factor II Relational	Factor III Informational
Academic Advising Items			
Advise 1 The university keeps me informed about who my AA is.	-0.237	.019	<u>.460</u>
Advise 2 My AA is knowledgeable about liberal studies reqs.	.082	<u>-.521</u>	<u>-.942</u>
Advise 3 My AA is knowledgeable about my major requirements.	-.110	-.282	.304
Advise 4 My AA encourages to meet with them regularly.	-.030	.102	.189
Advise 5 My AA assists me in planning my schedule.	.173	<u>-.423</u>	.273
Advise 6 My AA helps me understand university policies.	-.232	<u>.543</u>	<u>.478</u>
Advise 7 My AA helps me understand my academic standing.	-.160	.021	<u>-.467</u>
Advise 8R I have received misinformation from my AA.	-.139	-.142	.133
Advise 9 My AA helps me match my academic abilities.	-.324	<u>.777</u>	-.256
Advise 10 My AA assists me with career planning.	-.183	<u>-.563</u>	<u>.382</u>

TABLE 18 Continued

	Factor I Global	Factor II Relational	Factor III Informational
Advise 11 My AA refers me to other offices and services.	-.055	<u>-.440</u>	.159
Advise 12 My AA is easy to talk to.	.204	.309	.096
Advise 13 My AA is available when I need help.	<u>-.371</u>	.262	<u>-.639</u>
Academic Integration Items			
Liberal Studies 5 In my liberal studies courses instructors are capable teachers.	-.279	<u>-4.03</u>	<u>-.442</u>
Liberal Studies 6 In my liberal studies courses instructors are enthusiastic.	.014	.302	<u>.449</u>
Major 6 Faculty are concerned about my academic/career development.	<u>-.405</u>	<u>.613</u>	.190
Major 9 Faculty are willing to discuss course-related topics.	.028	<u>-.814</u>	-.053
Major 10 Faculty are willing to discuss non-course topics	-.111	<u>.512</u>	<u>-.400</u>
Major 12 At this time, I am satisfied with my major.	-.210	-.196	.113
Qual 1 Academic quality is a high priority of the faculty at FSU.	-.112	-.291	<u>1.073</u>
Qual 3 The student environment at FSU emphasizes academics.	<u>-.359</u>	.348	-.298

TABLE 18 Continued

	Factor I Global	Factor II Relational	Factor III Informational
Qual 5 Most of my classes at FSU are intellectually challenging.	.020	.283	-.268
Qual 10 I have found FSU to be a strong academic institution.	-.050	<u>-.572</u>	<u>-.531</u>

Academic Advising and Social Integration Domains

Thirteen variables were used to describe the academic advising domain (Set One) and 4 items were used to describe the social integration domain (Set Two). The analysis involved the derivation of canonical functions, the relationship measured between the two canonical variates, defined as the linear composites of the variables comprising each set. The solution identified no significant canonical correlations ($p < .05$). The eigenvalues and associated statistics for the test of the canonical solution are presented in Table 19.

Table 19
Canonical Correlation Between the Academic Advising and Social Integration Scales

Rc	Wilk's Lambda	Chi Square	df	P
.182	.938	29.420	52	.995

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of this research study was to examine student perceptions of academic advising and determine the relationship between academic advising and student persistence. The first focus of the study evaluated general views on academic advising and compared students' perceptions of advising based on their primary advising delivery system: faculty advisor, professional advisor or peer advisor. Directed by Tinto's (1975) theory of individual student departure, the second focus examined the predictive quality of factors associated with student enrollment behavior. Perceptions of academic advising were isolated and added to the model and their unique contribution to student enrollment behavior examined.

Six research questions were generated for this investigation and included:

RQ1: What are students' perceptions of academic advising?

RQ2: Do perceptions of academic advising differ based on the type of advising delivery system (faculty advisor, professional advisor, or peer advisor)?

RQ3: Do departing and returning students differ in their perceptions of academic advising?

RQ4: Do measures of Tinto's conceptual framework contribute to the prediction of students' future enrollment behavior?

RQ5: When added to measures of Tinto's conceptual framework, do perceptions of academic advising contribute to the prediction of students' future enrollment behavior?

RQ6: Do perceptions of academic advising function as measures of academic and/or social integration?

Two separate data sets were constructed for the purpose of this research study. Research questions one and two utilized the first sample consisted of 3943 undergraduates at Florida State University enrolled during the 2000-2001 and 2001-2002 academic years. Research questions three through six utilized the second sample, an FTIC subset of the original sample comprising 2064 participants. Demographic variables for the full sample were compared to statistics

compiled for the undergraduate population by the Office of Institutional Research at Florida State University in 2001. With the exception of gender, where the sample comprised 10 percent more females than in the population, the sample represented the undergraduate population by school or college affiliation, and race (FSU Fact Book, 2001).

The FSU Satisfaction Inventory, a 263 item, on-line instrument designed to determine student opinions regarding experiences within the campus setting, was the data source for this study. A five point Likert-Type scale measured the student perception responses and ranged from “Strongly agree” to “Strongly disagree”. The FTIC data set also incorporated academic and enrollment information made available by the Office of Undergraduate Studies and included high school grade point average, scholastic aptitude test scores, end of year grade point average and enrollment status.

Summary of Results

Research Question One

Research question one was examined by conducting descriptive statistical analyses on general perceptions of academic advising. This investigation demonstrated a range of opinion concerning academic advising. Areas where students expressed the most satisfaction included their level of ease when talking with their advisor, the advisor’s knowledge of liberal studies (general education) and university-wide requirements, and with the advisor’s availability when the student needed assistance. Participants expressed the greatest level of dissatisfaction with how well the university informed them of their assigned advisor. They disagreed with the statement that their advisors encouraged regular meetings. Finally, students disagreed with the statement that their advisors help them match their academic abilities with potential majors.

Research Question Two

A one-way analysis of variance was utilized to compare student perceptions of academic advising based on the primary advisor’s classification: professional, faculty advisor or peer advisor. Significant differences were observed in student perceptions of academic advising

based on advisor type. Additional analyses revealed the highest level of satisfaction with professional advisors, followed by faculty advisors. Students were least satisfied with advising when a peer advisor was designated as the student's primary advisor.

Research Question Three

Independent samples t-tests were employed to compare perceptions of academic advising between groups of departing and returning students. Results revealed no significant differences in perceptions of academic advising between the two groups of students.

Research Question Four

A discriminant analysis was employed to classify groups of returning and departing students based on factors associated with Tinto's (1975) model of student departure: background characteristics, academic integration, social integration, and commitment. Results from this analysis failed to demonstrate the contribution of predictor variables in differentiating between the two groups of students.

Research Question Five

A second discriminant analysis was completed to study the contribution of advising perceptions to the differentiation of returning and departing student groups. Results failed to demonstrate a significant contribution of the academic advising scale to student enrollment behavior.

Research Question Six

To examine the relationship between perceptions of academic advising and measures of student integration, canonical correlation analyses were conducted. These analyses measured academic advising scale scores in relation to the scores from the academic integration and social integration scales. Results revealed three significant and positive correlations between the

academic advising and academic integration scales. These results were interpreted at the construct level, however, and could not be interpreted at the item level due to inconsistent correlational directions. The canonical correlation analysis between the academic advising and social integration domains failed to reveal a statistically significant canonical correlation.

Discussion

Results generated by the six research questions directed the following conclusions.

Student Perceptions of Academic Advising

Emergent patterns from the data substantiated previous findings within the research on academic advising. An initial exploratory factor analysis inquired into the presence of dimensions within the thirteen-item academic advising scale. Consistent with findings from Fago (1995), analyses in this study revealed advising as a singular construct, demonstrating no evidence for the existence of separate advising dimensions. The findings revealed a coherent picture of academic advising despite the multiple roles within the academic advising function. Based on the results from this study, relating institutional policies, connecting students to appropriate campus resources, and providing mentoring support are on even terms and contribute to a synthesized view of academic advising.

A rank order of advising items, however, revealed varying degrees of satisfaction among the individual measures of academic advising. Students were most satisfied with advisors' knowledge of general education and major requirements. Students perceived advisors as easy to talk to and available when they needed assistance. Areas where students were least satisfied included the degree to which the university informed them of their assigned advisor, the level advisors encouraged regular meetings, and the extent that advisors helped students match their academic abilities with potential majors.

The first result revealing dissatisfaction with the level the university keeps them informed of their assigned advisor reveals a significant institutional problem warranting immediate attention. If an interruption exists between the need for advising services and the students' knowledge of where to turn for help, that gap must be addressed.

The second finding requiring attention concerns students' views that advisors do not encourage regular meetings or assist them by matching their academic abilities with potential majors. These findings relate to the literature separating academic advising into two distinct camps, prescriptive academic advising and developmental academic advising. Crookston (1972), an original theorist calling attention to this distinction, described prescriptive advising as an authoritarian relationship similar to a doctor and patient dynamic, where the advisor imparts information. In contrast, the developmental advising approach encompasses a unique relationship with each student that both stimulates and supports the student's quest for an enriched educational experience (Ender, 1997).

Following an extensive review of the literature, a description of developmental advising was set forth by Ender and Wilkie (2000). These researchers outlined developmental advising as an ongoing relationship between the advisor and student that is initiated by the advisor. It is based on a holistic concern for the student's maturation within the cognitive, affective, career, physical and moral domains of the student's world. Developmental advising entails a goal-oriented process where academic decisions are discussed within a context of vocational and long-range life goals. Developmental advisors operate within a network of student service providers requiring that the advisor remain connected to campus and community resource representatives.

Although developmental academic advising is philosophically undisputed and documented within the literature as comprising features most closely associated with student retention (Cuseo, 2003), the practice of incorporating the developmental concepts is far more difficult to achieve. These findings support the message promoted by academic advising researchers (Crockett, 1985; Frost, 2000; Habley, 1991) that in addition to providing accurate information, advisors are needed to assist students with decisions pertaining to career and life planning. According to Cuseo, students' decisions about majors and careers occur while students are in college. It is unrealistic to expect students to make these decisions without first identifying and exploring a range of suitable curricular offerings. Implementation of the developmental advising approach poses a challenge to be pursued by educators committed to the academic advising enterprise. Frost (2000) concluded,

Although theory and research offer improvements to advising and to similar components of the academic experience of undergraduates, too little has been done to

incorporate these theories and research into actual gain. In other words, action lags behind thought, leaving a gap to be filled. (Frost, 2000, p. 13)

Advising Delivery Systems

The second analysis completed for this study compared students' perceptions of academic advising based on advisor classification. The delivery systems assessed included professional advisors, faculty advisors and peer advisors. Professional advisors were given the highest level of student satisfaction followed by faculty advisors. Students were least satisfied with academic advising when a peer advisor was identified as their primary advisor.

These results reveal critical information concerning students' experiences with academic advising. The literature describing the strengths and weaknesses of each delivery system (Reinarz, 2000; Crockett, 1985) suggest reasons for these findings. In the current academic climate of a large public institution, students must navigate a complex network of academic rules and requirements mandated by legislative policy. Immersed within the world of prerequisites, course sequencing and exceptions to the rule, professional academic advisors are capable of providing immediate and accurate assistance. Full-time professional advisors have chosen advising as an occupation, demonstrating their commitment to student guidance (Reinarz, 2000). Crockett (1985) added the list of hiring criteria as an additional factor linked to student satisfaction. Counseling skills and the desire to assist students on their academic journeys are the qualities used to evaluate candidates for academic advising positions. These interpersonal qualities have been revealed within the literature as closely associated with students' satisfaction with academic advising (Belchair, 1999) and lend strong support for recognizing the role of the professional academic advisor as a viable campus representative.

For faculty members at a large public institution, academic advising is one of many competing functions. Academic advising is not typically included as a factor in faculty evaluations or in the faculty reward structure (Habley, 2000). Receiving little if any formal training, faculty members are not equipped to respond to issues entangled by institutional policies and procedures (Reinarz, 2000). Based on the conditions surrounding the faculty advising function, coupled with the complex set of institutional general education requirements, it is not surprising that students at this institution are less satisfied with faculty advising.

Peer advisors were the final group evaluated among the three advising types and rated the lowest in student satisfaction. Recounting experiences and offering firsthand knowledge from a student's viewpoint, peer advisor programs have been identified as a valuable addition to a traditional advising program (Reinarz, 2000). The results from this inquiry however, revealed a less positive picture of the peer advising delivery system when compared to professional and faculty advising programs.

These findings offer an important contribution to the field of academic advising. The higher ratings assigned to professional advisors within this study validate their role within the academic environment. Research within the discipline has not made the distinction among faculty, professional and peer advisors. This gap precludes the understanding of how each role uniquely influences students. The results from this study demonstrate individual differences among the three delivery systems and suggests the need for greater attention to this distinction.

Academic Advising and Academic Integration

Previous studies examining the predictive quality of Tinto's model included academic advising as a measure of the academic integration construct (Getzlaf, Sedlacek, Kearney & Blackwell, 1984; Grosset, 1991; Nordquist, 1993). Advising however was not separated and fully examined for its influence in affecting enrollment behavior.

In addition to isolating the advising scale and examining its contribution to enrollment behavior, an exploratory research question was developed to study a potential statistical relationship between variables measuring the academic integration and academic advising constructs. Three significant factors were revealed indicating a direct correlation between the two variable sets. Upon further examination the constructs indicated a global factor, a relational factor, and an informational factor. These findings validate the presence of underlying dynamics occurring between students and faculty, and students and advisors. For example items the relational factor comprised items that address personal interaction with both faculty and advisors. The informational factor included more objective items, but included interaction with both faculty and academic advisors as central participants within the academic world of the institution.

Academic Advising and Enrollment Behavior

The methodological model constructed for this research study failed to differentiate departing and returning students utilizing the original concepts of Tinto's model in addition to the incorporation of the academic advising scale. Comparisons between returning and departing students for each of the items used in this study revealed no significant group differences.

Reasons for these results can be attributed to several possible explanations.

The first possible interpretation for the absence of significant findings can be attributed to insufficient instrument sensitivity. The survey utilized for this study was initially constructed to assess student satisfaction. Although data from student satisfaction instruments are frequently evaluated and their findings utilized to guide institutional retention policy (Hendel & Tomsic, 2000; Juillerat & Schreiner, 1996), the Undergraduate FSU Satisfaction Inventory was not specifically designed as a predictive tool, and may lack the properties necessary to distinguish departing and returning students.

An alternative explanation for the model's inability to distinguish departing from returning students is the relatively high retention rate at Florida State University. The most recent national retention statistics reported by the ACT listed the five-year graduation rate at 51%, and the national freshman to sophomore retention rate at 74%. Comparatively, Florida State University's most recent five-year graduation rate is approximately 59% and the freshman to sophomore retention rate is 85%, reflecting a relatively high level of institutional success in Florida State University's campus retention efforts. The scales developed for this study addressed student perceptions of the institutional climate. The higher retention rate and corresponding fewer number of departing students completing the survey, may have contributed to a deficiency of systematic variance within the dataset. Alternatively, their leaving behavior was due to individual circumstances beyond the range of information gathered through a general satisfaction survey.

A final possible explanation for the lack of statistically significant findings is derived from more recent critical analysis of Tinto's model performed by Braxton and Lien (2000). These researchers assessed the effects of academic integration on subsequent institutional commitment and persistence, comparing single-institutional and multi-institutional tests. Their

findings revealed only modest empirical support for single-institutional studies, compared to multi-institutional appraisals, which demonstrated robust empirical support (Braxton & Lien, 2000). The authors attributed the strength yielded to the multi-institutional assessments as a result of enhanced variability and consistent measures of academic integration afforded to these studies.

Limitations of the Study

Although every effort was exercised to control for limitations, this research study was conducted within the confines of fixed parameters. The sample comprised students who had completed a student satisfaction instrument administered by the Division of Undergraduate Studies at Florida State University. The completion of the survey was voluntary and thus a self-selected group, a condition demonstrated to threaten external validity. Overall, participants appeared to represent the student population at the institution, however ten percent more women than the number comprising the student population completed the survey. Though this study utilized a sufficient sample size, the initial response rate was also a factor limiting the study's validity, as approximately 22% of the students invited to participate in this study actually completed the survey.

The second limitation pertains to the date of survey administration. Students were asked to complete the FSU Satisfaction Inventory in March of the two Spring semesters. According to the Florida State University Office of Institutional Research, the number of students who withdraw from the university prior to the start of their second semester comprises a significant number of all non-returning freshman students. The percentage of students departing the institution directly following the Fall 2001 semester comprised 264 students, representing 32.08 percent of the total number of first year voluntary withdrawals. The timing of the survey, therefore, precluded the participation of these students, and may have altered the final results of this research study.

A final limitation warranting attention concerns the length of the satisfaction instrument and the amount of missing data. The survey itself spans eight full pages and contains 263 items. As students progressed through the survey, the percentage of completed items dramatically decreased. Missing data comprised items where a response was either not selected, or where

students chose N/A as their response. For the scale items analyzed in this study, the percentage of missing data ranged from 25 to 66 percent of responses, representing a substantial number of survey items. This limitation compromised the integrity of several of the statistical analyses used in this study, which require complete data for each scale item in order to be effective. The extent of missing data also raises serious questions concerning the students' willingness to complete the full survey or their level of interest in the subject matter being addressed throughout the instrument.

Proposals for Addressing Survey Limitations

To increase the validity of the FSU Satisfaction Inventory, it is recommended that random sampling replace convenience sampling procedures. This practice would allow for greater statistical power and would better direct campus initiatives resulting from the use of this instrument.

In order to gain a more representative sample of students, it is suggested that the survey administration occur prior to the completion of the first semester as an alternative to the spring administration. This practice would enable the inclusion of those students who depart from the institution following their first semester, providing more accurate information to administrators and researchers.

A comparison study examining differences between a face-to-face survey administrations with the current on-line format is recommended. Utilizing both approaches would allow the researcher to assess group differences in the number of survey respondents and the level of survey completion. The on-line format is convenient, yet this convenience is secondary if the on-line format threatens the instrument's validity.

An alternative approach to increasing the response rate would involve the identical survey, however distributed through a series of instrument segments. Again, abbreviated installments may increase the overall sample size and number of completed questions.

The final proposal addresses survey length and the number of missing items. It is recommended that the survey length be economized. The Cronbach alpha coefficients indicated high internal consistency ratings among the various scales employed in this study. This finding suggests that collapsing variables would result in fewer items and allow for comparable results. It is expected that a survey containing fewer items would increase the number of participants and

the total number of completed surveys. It is also advised that the Likert-Type scale selected for this study include a neutral response either in addition to the non-applicable response, or in its place. This would eliminate the number of missing items since the neutral response would allow for a numerical assignment versus elimination of the item.

Recommendation for Future Research

The volume of research articles generated by Tinto's model offers ample evidence to support the dynamic nature of student enrollment behavior, and the strong interpersonal component affecting that behavior. The results of this study supported perceptions of academic advising as having a statistically valid place within the academic integration construct. This result alone merits further exploration of the link between academic advising and student retention and it is recommended that future research continue to explore the academic advising and student retention link.

1. Future studies examining perceptions of academic advising within a retention framework, would be better served by utilizing a validated survey instrument designed to predict student enrollment decisions. For example, the instrument designed by Pascarella and Terenzini (1980) was continuously modified over a span of several years to improve its predictive quality. It is recommended that future replications of this study examine the contribution of academic advising perceptions by incorporating the academic advising scale within a previously validated retention instrument.
2. It is recommended that this same research study be conducted utilizing a sample from an institution with a higher attrition rate. The sample surveyed for this research project was drawn from a population with a relatively high freshman to sophomore retention rate. Institutions where the attrition problem has not yet been addressed would present an environment more conducive to understanding the association between perceptions of the academic advising services and student attrition.
3. The third recommendation addresses the weaknesses identified by Braxton and Lien (2003). To account for the weak support for Tinto's model within the single-institutional studies, the authors disputed the measures selected within several retention studies used to represent academic integration. Based on a critical analysis of Tinto's decipherment of Durkheim's study

of community and suicide, Braxton and Lien advanced a new conception of Durkheim's work in relation to student departure from higher education. These researchers challenge retention scholars to consider the development of measures of academic normative congruence as well as better delineate measures of intellectual isolation.

4. It can be argued that the linear approach to understanding the retention issue has assembled a significant knowledge base, yet remains an ineffective source for successfully affecting institutional retention rates. The fourth recommendation suggests the use of alternative methodologies to study this problem. Advocating the qualitative approach to the study of student attrition, McKeown, Macdonell and Bowman (1993) presented their own challenges to Tinto's interpretation of Durkheim's work on suicide and criticized Tinto's theory for its weak link to the empirical world of retention research. They suggested that Tinto's concepts loosely guide the development of more accurate theories. In order to do this, these researchers advocated the use of qualitative methodological techniques to examine the complex social life of colleges and universities from the point of view of the student as actor.

Nordquist (1993) effectively demonstrated this point by employing qualitative techniques to gauge students' perceptions of their experiences and their decisions to leave college. Nordquist's work was successful in conveying the critical contribution of student voices in understanding how Tinto's concepts were conveyed in the daily life of the student. As Nordquist noted, Tinto himself recognized that no study examining the roots of student departure is complete without reference to student perceptions of their own experiences. Future research would benefit from a qualitative design where departing students were encouraged to express their thoughts, feelings and opinions concerning their collegiate experiences.

It is recommended that future research studies within the academic advising discipline continue to study the differences among the advising delivery systems examined in this study: professional advisors, faculty advisors and peer advisors. Empirical evidence is needed to better understand the strengths and weaknesses of each system and their unique relationship to student retention. This knowledge can be used to guide institutional policy and challenge current faculty assignments and reward systems.

5. Future quantitative and qualitative research must not neglect academic advising variables as legitimate measures of the students' academic experience demonstrated by the statistically significant results of this study. It is recommended that researchers develop research designs

where academic advising variables are isolated examined as a separate component to the key elements of Tinto's conceptual framework.

Implications for Practice

The results of this research study are instructive and provide a deeper awareness of students' views regarding academic advising. The descriptive comparisons of items comprising the academic advising scale indicate areas requiring programmatic attention. The following recommendations are suggested for academic administrators and other individuals responsible for training and leading academic advisors on this campus.

1. Developing innovative methods to advertise and promote advising on this campus is a recommended practice born out in this research. The disconnect between a student's need for academic advising and the perceived lack of knowledge on where to locate those services is a cause for concern. Solutions to this problem include regular notification of the student's assigned advisor, a centralized posting of the designated advisors within all academic units, and campus outreach efforts where students are regularly informed of the name and location of their assigned advisor.
2. Encouraging students to attend regular advising sessions is a second recommendation for practitioners. This proposal addresses student discord with the relatively high level of disagreement that advisors encourage regular meetings. This outcome connects to Miller's (1985) work with the Academic Advising, Intervention and Monitoring System (AIMS) at the University of Kentucky. Prompted by the need to address a high rate, the AIMS program incorporated a mandatory advising program where advisors initiated regular contact with students and informed them of their academic progress. Students expressed satisfaction with intrusive advising, an unanticipated outcome of this program. Academic advising administrators may wish to consider either mandatory advising or include an approach to advising that is more proactive and encouraging of student contact.
3. The final recommendation involves the developmental advising challenge. It is clearly established in the literature that the developmental approach is the preferred method for effective academic advising. Students are confronted with significant and complex decisions regarding the direction of their academic and vocational careers. It is expected that advisors will offer

assistance in matching student abilities with the assortment of choices and offerings within the institution. Advisors must heed this call and develop innovative avenues for practicing the developmental approach to academic advising.

Concluding Remarks

In 1975 Vincent Tinto demonstrated great courage when he stepped back to critique the higher education enterprise and voice his concerns regarding quality issues pertaining to undergraduate education. This act invited the work of university scholars to follow Tinto's lead and challenge assumptions commonly held by educational leaders regarding students on their campuses. Each of the research articles discussed within in this paper contributed a unique piece of evidence to better understand the dynamics of a flourishing and complete college experience. The connecting theme throughout each emphasized the human element as the most critical component of a successful institution.

This research study demonstrated the role of the academic advisor as having a legitimate place within the membership of the institution. Students rely on the guidance and wisdom of elders to help navigate their passage into the adult world. Information and insight are essential when students are confronted with the far-reaching effects of their academic and personal decisions. The challenge to educators is to protect that process and provide students with access to faculty, academic advisors and administrative leaders who are committed to building a student-centered community and place learning at the heart of the institution's mission.