Success in the First Year: Impact of Alternative Advising on Students at a Liberal Arts College

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SUCCESS IN THE FIRST YEAR: IMPACT OF ALTERNATIVE ADVISING ON STUDENTS AT A LIBERAL ARTS COLLEGE

by

James E. Swanson

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
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Department of Educational Leadership, Research and Technology
Dr. Andrea Beach, Advisor

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Small faith-based liberal arts institutions are increasingly focused on recruitment and retention because it is critical to their existence. Because these institutions are completely enrollment driven, the numbers of students who persist through to their second year of college is a necessary administrative focus. Scholars have found that interactions between students and members of the institution, especially faculty, are critical to student persistence during the first year of college. Research has also demonstrated that academic advising plays an important role in first-year student persistence. A question remains, however, whether students are retained because of time spent with faculty or because of academic advising.

This study was designed to compare different approaches to predicting and influencing student persistence. Three primary approaches to advising were implemented in an experimental design: prescriptive, developmental, and strengths-based advising. The study also incorporated the use of the Myers-Briggs Type Indicator (MBTI), and student demographic characteristics. This study sought to determine the significance of three influences to student retention; personality, institutional faculty advising, and student development utilization of the Clifton StrengthsFinder™ inventory.
The study employed a randomized experimental design, in which 156 students completed the study. All participants completed the MBTI as a regular part of their freshman seminar. The control group (N= 64) received the institution’s normal advising process of assistance. Intervention group 1 (N= 41) received extra time with a specific faculty member. Intervention group 2 (N=51) received the Clifton StrengthsFinder™ inventory and extra time with a trained Clifton StrengthsFinder™ member of the student development staff.

Persistence to the second semester, and registration for the second year was compared among the study groups. It was found that only intervention group 2, who received the Clifton StrengthsFinder™ inventory and extra time with a trained member of the student development staff, had a statistically significantly higher persistence when predicting who intended to return for their second year of college. No other study variable was significant.
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DEDICATION

This dissertation is dedicated to my wife Patti for her encouragement, compassion, and support during this very long process; to my three children, Johnathan, Timothy and Katie, for the joy they bring into my life. I also dedicate this dissertation to my parents Leslie and Linnea Swanson for their belief in me and for always challenging me to pursue my academic goals.
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James E. Swanson
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CHAPTER I

INTRODUCTION

Within the last three decades retention in higher education has become increasingly important to colleges and universities across the nation. Retention of students, particularly through the most critical year, the freshman year, has become a cornerstone for literature and research in higher education (Astin, 1993; Upcraft, Gardner, & Barefoot, 2005; Braxton, 2000; Levitz & Noel, 2000; Martinez, 1996; Tinto, 1993). Because of the urgent concerns of college administrators to increase retention of their institutions’ student populations, the characteristics of students who drop out compared to those who do not have become a matter of increasing study and research (Bean & Eaton, 2004; Glynn, Sauer, & Miller, 2003; Tinto, 1975, 1993).

Adequate enrollment at many small faith-based liberal arts institutions is critical to their existence. This is because much of their funding comes from tuition, food, housing, fund raising, and annual gift income. Because many small faith-based liberal arts institutions are primarily enrollment driven, the numbers of students who persist into their second year is a necessary administrative focus. When enrollment drops, every college administrator ponders possible causes, and the steps that can be taken to reduce or eliminate such losses. Private institutions do not receive funding from the government and because of this they are obligated to fight the competitive advantage of the public institutions by offering attractive and creative programs, environments, and other features that may not be as readily available on public campuses (Waymire, 1994). Persistence
may be the best indicator that an institution is meeting its goal of student satisfaction and success (Levitz, Noel, & Richter, 1999).

Small, private, liberal arts institutions make an intentional effort to be distinctive. They attempt to create a community where the faculty, students, and staff share a common worldview and where their common values unite them in a learning environment. Many religiously affiliated liberal arts institutions integrate faith and learning in a way that allows the student’s faith to touch the entire range of life and learning (Holmes, 1996). Enrollment requirements and a commitment to a community lifestyle statement often make small faith-based liberal arts colleges attractive to a limited population of students. Because of these characteristics, retention in the faith-based private liberal arts institution is critical.

Overwhelming research evidence indicates that the greatest student attrition in higher education occurs during the first year (Upcraft, et al., 2005; Habley & McClanahan, 2004; Pascarella & Terenzini, 2005; Reason, 2003). Braxton, Hirschy, and McClendon (2004) reported that approximately one-third of the freshmen in the United States are not at the same institution one year later. Pascarella & Terenzini (2005) noted that only 75 to 79 percent of students at private institutions and 72 to 79 percent at public institutions persist into their second year of college. Other studies have reported that only one-third of full-time students stay at the institution where they first matriculated until degree completion (Bortman, 2005; Crissman, 2001). Researchers have also discovered that the most critical decision making time for first-year students regarding whether to leave college is in the first three to six weeks into the semester (Upcraft et al., 2005;
Blanc, Debuhr, & Martin, 1983; Crissman, 2001). It is clear that early and effective intervention techniques are critical (DeBerard, Spielmans, & Julka, 2004; Tinto, 1987).

Successful integration of today’s students into higher education institutions requires appropriate interventions to address these students’ diverse differences and needs (McNeil, 1991). Unless students receive the attention and the assistance they need, many will become attrition statistics. It is imperative that top-level administrators support the institutional retention efforts and that everyone in the institution make retention a priority. For intervention programs and services to be successful, retention strategies must be powerful enough to effect change (Seidman, 2005).

Influences on Student Persistence

Researchers have indicated that the unique missions and focus of small liberal arts colleges, especially those with a strong denominational culture, pose challenges for student integration and, therefore, persistence. Astin (1975), found that “students persist better at religious colleges if their own religious background is similar” (p. 175) to that of the institution. Religious fit is an issue that can impact persistence (Forbes, 1998). Small liberal arts institutions need research that can help them target variables and implement interventions that can help them retain students. Key among approaches have been a focus on student characteristics, student interactions with faculty, and student advising.

Student Characteristics

The majority of previous studies on retention predictors have explored factors such as pre-college characteristics (i.e., high school rank, high school size, high school grade point average, SAT scores, socioeconomic influence, parental expectations, level of parental education, etc.), as well as gender and personality (Astin, 1993, 2006; Caison,
2005; Solder, Lee, & Duby, 1999; Pascarella & Terenzini, 1991, 2005; Schuh, 2005b). In several studies, however, factors such as age, sex, socioeconomic status, the proximity of the college to home, and high school size, were found to have little influence on whether a student did or did not persist (Burns, 1985). There is increasing evidence that first-year experience courses, which assist the first-year student in adjustments from high school to college, are effective tools for improving retention rates (Keup & Barefoot, 2005).

Student personality elements have been an important area of persistence research. Researchers have found that personality profiles such as the Myers-Briggs Type Indicator (MBTI) can serve as valuable tools in identifying students at risk of dropping out. The MBTI is a personality assessment tool that provides information about the way people are drawn towards different interests, perspectives, and behaviors. The MBTI may be a valuable tool in identifying students who may be at-risk during their freshman year. There have been several studies that have connected the MBTI to student retention in both private and public university settings (Baudouin & Uhl, 1998; Burns, 1985; Lounsbury, Saudargas, & Gibson, 2004; Provost, 1985; Van, 1992).

Student Interaction with Faculty

Recent literature suggests that students who demonstrate engagement in the campus through academic and co-curricular activities which enhance student learning and connect students in creative ways to the institution, will be more likely to persist (Kuh, Kinzie, Schuh, & Whitt, 2005). Students who are involved in the campus are more likely to have contacts with faculty and other students related to their academic work, which lends itself to increased student learning and persistence (Skipper & Argo, 2003; Astin, 1985; Upcraft et al., 2005; Pascarella & Terenzini, 1991, 2005; Tinto, 1993). The contact
with faculty can motivate a student to discuss intellectual issues, and potentially improve learning. Institutions in which faculty engage students in and out of the classroom and place a high priority on enriching educational experiences will have students who feel supported and who are active participants in learning (Umbach & Wawrzynski, n.d.). Faculty-to-student interaction is expected at small private institutions for just these reasons (Pascarella & Terenzini, 2005).

Astin (1993) reports that “next to peer groups, the faculty represent the most significant aspect of the student’s undergraduate development” (p. 410). His research reveals that satisfaction with faculty has a positive correlation with “hours per week spent with the faculty outside of class, having a class paper critiqued by an instructor, and being a guest in a professor’s home” (p. 282). Faculty interaction is most effective when it occurs both in and out of the classroom. Faculty–student interaction is described as spending time with a faculty member on a research project, assisting a professor in working on a paper, and actual hours per week a student spends meeting and talking with a faculty member (Astin, 1993; Light, 2001; Pascarella & Terenzini, 2005; Tinto, 1993). When examining students’ satisfaction with their college education, researchers have found that faculty-student interaction is crucial (Astin, 1993; Metzner, 1989; Pascarella & Terenzini, 2005; Tinto, 1999).

**Advising**

One approach to faculty-student interaction is faculty advising of students. Academic advisors influence the students’ decision-making process by helping them interpret the requirements of their curricula, discussing their academic options and identifying and directing student talent, and directing students to other essential services.
on campus (Smith, 2004). Several higher education researchers examined the association between academic advising and student retention (Creamer, 1980; Habley, 1981; Metzner, 1989; Pascarella & Terenzini, 2005; Tinto, 1993; Tuttle, 2000). Research has established a clear link between effective academic advising and improved retention. As a result, colleges and universities are placing a greater emphasis on both retention and academic advising (Habley, 1981; Tinto, 1993).

Advising can take numerous forms. Three identified approaches are Prescriptive, Developmental, and Strengths-based. Prescriptive advising is a more hierarchical or authoritarian approach; developmental advising is an approach in which students bring their questions to the advisor and the advisor provides specific answers and gives direction (Crookston, 1972; Fielstein, 1989; Habley & Gordon, 2000). Developmental advising is a process that allows for on-going interaction and personal relationship building, and is concerned with the growth of the student (Anderson & Schreiner, 2005; Habley & Gordon, 2000). A strengths-based advising approach is developmental in nature but is meant to help students focus more on their strengths rather than their weaknesses. This approach is intended to lead students to discover their natural talents and gain unique and valuable insights into how to develop such talents into strengths (Hodges & Harter, 2005). This advising method is linked to the Clifton StrengthsFinder™ inventory and is one of the selected instruments used in this study. The Clifton StrengthsFinder™ inventory (CSF) was developed, copyrighted, and is a trademark of the Gallup Organization, Princeton, NJ. The strengths approach to advising attempts to direct the student in ways that will motivate the student to learn. While this tool has been linked to many positive studies including academic success and strengths development,
and to student confidence in the classroom, there is at this time no known link to 
freshman persistence and the use of the Clifton StrengthsFinder™ inventory.

Despite the very extensive literature on the need to retain students in higher 
education, much remains unknown about the nature of the dropout process. An aspect 
that needs evaluating is the quality element to advising and how time spent with faculty 
might assist the first-year student and help the student persist through to the second year 
of college (Metzner, 1989).

Purpose of the Study

Research indicates that the first six weeks of the semester are the most critical for 
retaining first year students as they struggle to adapt to a new environment and to new 
academic challenges (Upcraft et al., 2005; Pascarella & Terenzini, 1991, 2005; Seidman, 
2005; Tinto, 1993; Upcraft, Kramer, & Gary, 1995). It is necessary for institutions to 
implement early and effective intervention techniques as almost three fourths of all 
dropouts leave at some time during the first year (Upcraft et al., 2005; Tinto, 1993). The 
first-to-second year attrition rate is perhaps the most important determiner of an 
institution’s graduation rate (Levitz et al., 1999).

But what is an effective prediction and intervention? This study was designed to 
compare different approaches to predicting and influencing student persistence at a small 
faith-based liberal arts college. Three primary approaches to advising were implemented 
in an experimental design: prescriptive, developmental, and strengths-based advising. It 
also incorporated the use of the Myers-Briggs Type Indicator, and student demographic 
characteristics, since these have shown mixed results in prior research.
Considering the unique challenges of adaptation and persistence that students face at private institutions, this study sought to determine if personality influences students to persist, if regular meetings with institutional faculty advisors retain students, or if persistence is increased when students met with student development staff to learn key themes regarding their strengths using the Clifton StrengthsFinder™ inventory. As such, it examined advising interventions that the literature indicates could positively influence retention (Clifton & Anderson, 2002; Habley & Gordon, 2000), as well as other potential predictors.

Research Questions

This study examined the following research questions:

1. To what extent do student background characteristics (e.g., high school grades, gender, age or race) influence retention from the first to second semester and first to second year?

2. To what extent is there a pattern to the Myers Briggs Type Indicator personality types of the first-year freshmen who drop out of school after or during their first full year?

3. To what extent does extra time spent with a faculty member help retain first-year freshman students into their second semester and/or into their second year of college as opposed to those who did not receive the extra time with a faculty member?

4. To what extent does the Clifton StrengthsFinder™ inventory help retain students into their second semester and/or into their second year of
college as opposed to those who did not receive the Clifton StrengthsFinder™?

5. Is there a relationship among background characteristics, Clifton StrengthsFinder™ participation and retention?

6. Is there a relationship among background characteristics, extra time spent with faculty and retention?

Setting

The private college used in this study, like many private colleges, is unique in its mission and focus. Grace College is a small four-year, mid-western faith-based liberal arts college located in Winona Lake, Indiana. Founded in 1937, the institution enrolled 872 students in the fall of 2005. The college is located in a small town of 4,235 residents as of the 2005 census (United States Census Bureau, 2005). A board of trustees operates the college, which is the only college affiliated with the Grace Brethren Church. The college is a member of the Council for Christian Colleges and Universities (CCCU). The student body represents a number of states and foreign countries; however, 57% of the students are from Indiana. The college is moderately selective; entering first-year students in the fall of 2005 have an average 3.46 grade point average on a 4.0 scale. The population used in this study was comprised of 217 first-time full-time students.

Methods

This study was set up as a quantitative experimental design that examined three potential influences on persistence: regular academic advising as practiced by the college, extra attention from faculty members, and use of the Clifton StrengthsFinder™ inventory. The study also examined personal characteristics (through the use of the
Myers–Briggs type Indicator and general demographic data) that may be related to the likelihood of persistence or attrition of the first-year, first-time class of 2005 at Grace College.

All first-year, first-time students at Grace College were asked to complete the Myers Briggs Type Indicator (MBTI) within the first three weeks of the fall semester of 2005. This is routine, as a part of the current freshman foundations class offered at the college. The students were then invited to participate in the study and after consent was given, the students who consented were randomly divided into three groups. The first group (control group) received the regular advising meetings that are traditionally given at the institution and follow a more prescriptive approach. These meetings are usually directed towards the review of fall class schedules and the assigning of classes for the subsequent spring semester. The second group (Intervention group 1) was given two additional meetings with an assigned faculty advisor for the purpose of building relationships and giving the student additional contacts with a faculty member to assist in connecting the student to the campus environment. The third group (Intervention group 2) was given the Clifton StrengthsFinder™ inventory and required to attend two meetings with a trained strengths-based advisor. The goal of the two meetings was to interpret the tool and apply it to the students’ college goals as well as their career plans after graduation.

Attrition data was collected at the end of the first semester (Fall 2005) and after students registered for the subsequent year (April, 2006). At the completion of the first year, frequencies, Chi square, and logistic regressions were used to compare the characteristics of students that the institution retained and test for statistical significance.
with those who left the institution after their first semester and/or their first year at Grace College.

Definition of Terms

Attrition - The loss, for any reason other than graduation, of one or more students who have enrolled into classes in an institution of higher education.

Dropout student - A non-persisting student who enrolled in the fall semester for classes and did not enroll in the spring semester for classes or who did not enroll in the subsequent fall semester for classes.

Freshman - A first year student entering college or transferring into Grace College with less than 30 hours of completed college credit.

Clifton StrengthsFinder Inventory™ - This tool is a 60-minute web based assessment instrument. The tool is a 180-item questionnaire, presented to the user over a secure connection. The tool measures the presence of 34 themes.

The Myers-Briggs Type Indicator (MBTI) - A personality inventory that measures a person’s basic personality preferences with 166 question item questionnaire and records each individual’s score over-the-span of 8 different scales. It is a self-evaluating, self-administering, multiple-choice instrument. From the combinations of four pairs of preferences, 16 different personality types are possible.

Persisting Student - A student who enrolls for classes in an institution of higher education and who also enrolls for classes the subsequent semester.

Retention - The successful retaining of a student, over the span of his or her four years in an institution of higher learning, leading up to the earning of a baccalaureate degree.
Undergraduate - A student who is seeking a baccalaureate degree.

Delimitations and Limitations

The sample for this study was drawn from all degree-seeking students who entered Grace College as a first-year, first-time student during the fall semester of 2005 (N=217). This study is delimited to only the first-year, first-time students that entered Grace College in the fall of 2005. This study was limited to one institution in order to set up an experimental design that was controllable.

There are certain limitations associated with this study. First, there were many factors that influence a student’s decision to stay or leave an institution that were not explored. Second, some students chose not to participate in the study and two students withdrew during the study. Also, some students were absent during the class in which the researcher sought volunteers for the study. Third, this study was limited to Grace College’s first-year first-time students. The results were not generalizable to other institutions such as large private liberal arts colleges, community colleges, public colleges or urban colleges with many different types of populations. Forth, during the research process, some students chose to not follow-through with all the steps needed to complete the process with their intervention groups. This made it difficult for the researcher to control both the faculty and the student during the process. Counteracting these limitations was the experimental design of the study, which is meant to control for confounding influences.

Summary

Retention of students has become a high priority in many small faith-based liberal arts institutions. Many factors are cited in the literature as influencing whether a student
persists into his or her second year of college. The ability to predict the likelihood for persistence and attrition in the first few weeks of the semester, and to create effective interventions, will allow institutions to target “at risk” students with programming and services that make a difference in their critical first year (Noel & Levitz, 2004b; Seidman, 2005; Tinto, 1993).

As stated earlier, this experimental design was developed to determine if student persistence is predicted by personality preference, or if it can be influenced by meetings with faculty advisors for the purpose of connection and relationship building, or through participation in the Clifton StrengthsFinder™ inventory advising process.

Small faith-based liberal arts institutions such as Grace College are in need of such research in order to develop a baseline of data and form a foundation for providing better services and a more proactive approach to student retention. Institutions can use the results of this study to assist in designing early intervention techniques for first-year students. This study may also help institutions decide which intervention tools may be most effective on their campuses. Because the design of this study is experimental, the results will be useful in determining the effectiveness of the interventions with few to no confounding variables. The results are therefore definitive.
CHAPTER II
REVIEW OF RELATED LITERATURE

This review of the literature examines current research in the area of student attrition and student retention. It focuses on the reasons for student attrition and the factors that may prove to be helpful in predicting whether or not a student may be at-risk for attrition. There are many factors and circumstances that influence student’s decision to stay in college or leave after their first year. The topic of student attrition and retention has become a major focus for many small liberal arts institutions as they try to find creative ways to retain students. The focus of this literature review will be on the following areas: statistics on student persistence, theories of student retention, variables that impact retention, notable retention strategies, advising strategies, and reviews of the Myers Briggs Type Inventory and the Clifton StrengthsFinder™ inventory as tools in retention strategies.

Student Attrition, Persistence, and Retention

Statistics regarding attrition in U.S. colleges and universities are varied. Depending on what statistic is quoted, one in two or one in three college students will not graduate from the school that they entered (Bebergal, 2003). Anyway one looks at the numbers, it is evident that student attrition is an enormous issue in higher education today. The U.S. Department of Education does not keep specific dropout rates for students because of the recent influx of part time students and the number of students returning to school to either complete or further their education. The Department
estimates, however, that approximately one third of all high school seniors who enter college and/or universities drop out (Cody, 1995). Since 1983, ACT has collected a comprehensive database of first to second year retention rates and persistence to degree rates (ACT, 2005). Table 1 offers a summary of the first to second year retention rates by institutional type over the past 22 years for institutions.

Table 1
Retention Trends Freshman to Sophomore Year 1983-2005

<table>
<thead>
<tr>
<th>Highest</th>
<th>Lowest</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Two-year public</td>
<td>53.1 ('83)</td>
<td>51.3 ('04)</td>
</tr>
<tr>
<td>BA/BS public</td>
<td>70.0 ('04)</td>
<td>66.4 ('96, '05)</td>
</tr>
<tr>
<td>MA public</td>
<td>70.5 ('05)</td>
<td>68.1 ('89)</td>
</tr>
<tr>
<td>PhD public</td>
<td>78.1 ('04)</td>
<td>73.3 ('86)</td>
</tr>
<tr>
<td>Two-year private</td>
<td>72.6 ('92)</td>
<td>61.7 ('05)</td>
</tr>
<tr>
<td>BA/BS private</td>
<td>74.0 ('89)</td>
<td>60.1 ('97)</td>
</tr>
<tr>
<td>MA private</td>
<td>78.0 ('85)</td>
<td>74.3 ('03)</td>
</tr>
<tr>
<td>PhD private</td>
<td>85.0 ('85)</td>
<td>82.1 ('05)</td>
</tr>
<tr>
<td>National</td>
<td>68.3 ('04, '05)</td>
<td>66.6 ('96)</td>
</tr>
</tbody>
</table>

Source: Compiled from ACT Institutional Data File, 2005

Despite all the effort and money spent on many of the retention programs and services that have been implemented over the years, retention rates have not improved (Seidman, 2005).

This section will identify key literature in the history and study of student retention. When reviewing the literature that is available on retention, there are a few theorists who are mentioned most often: William Spady, John P. Bean, Vincent Tinto, Alexander Astin and Pascarella and Terenzini. These researchers have laid the theoretical groundwork for the study of college student retention.
Spady’s Model for Student Departure

Spady’s (1970) model was one of the first to emphasize the interaction between individual student characteristics and the environment. Spady (1970) developed a model of student retention using Durkheim’s (1951) theory of suicide, making a parallel with student integration into “the academic and social systems of the institution” (p. 57). Spady’s research proposed that students who do not integrate into the academic and social systems of the campus will be more likely to drop out of college. This model served as a precursor to Vincent Tinto’s (1975) model, which has become one of the most widely studied and tested models of college student attrition.

Tinto (1975, 1993) extended Spady’s (1970) work on connecting Durkheim’s theory of suicide to the study of college student attrition. Durkheim (1951) explained the concept of suicide by looking at the power of social ties as it relates to the decision to commit suicide. Suicide is more likely to occur when individuals are insufficiently integrated into the fabric of society. Two types of non-integration into society are likely linked to suicide, first insufficient moral (value) integration, and secondly insufficient collective affiliation. When one’s values are divergent from the social conditions collectively, one is not connecting to the community and secondly, when one suffers from a deficiency in personal interaction with other members, one is not connecting within the community (Durkheim, 1951).

If we view the college setting as a social system with its own values and social structures, one can treat dropouts from that social system in a manner similar to that of suicide. What has been discovered is when we have insufficient interaction with others in
the college and insufficient congruency with the prevailing value pattern of the college we will have a low commitment to the social system within the college.

Tinto's Student Departure Theory

Vincent Tinto's Theory of Student Departure (1975, 1987, 1993) asserts that colleges are made up of two primary areas; the social and the academic. Academic integration reflects a connection between higher education and the student's future attainment of a degree for the purpose of an occupation. The social integration domain refers to the student's participation in activities of the campus and the overall college life. Tinto's model stresses the importance of a student's connection to both the academic aspects of the institution and the social aspects of the institution. It is vital that the student become integrated in both the social and the academic environments for proper "institutional fit." The better the student fits into these two environments, the better the chances the student will have to persist at the university. One study notes that several of the personal and institutional factors that influence institutional fit are: (a) pre-entry characteristics of students, such as family background (financial status, family values, parent education), personal attributes (gender, race, personality traits), academic abilities and skills, and prior schooling; (b) personal growth and institutional commitments; (c) formal and informal academic experiences, such as past, and present academic performance, faculty and staff interactions, extracurricular activities, and peer group interactions; and (d) involvement in the social system (McNeil, 1991).

Tinto's model focused on three stages that students must successfully navigate in order to persist in college. The three stages are separation, transition, and incorporation. The separation stage is when students separate from their past communities and willingly
chooses to enter an academic community. The transition phase of adjustment occurs when students are adapting to the initial changes in their environment and are developing an understanding of their new campus community and moving towards integrating into the academic and social aspects of the campus. Finally, the third stage of incorporation is when students have successfully engaged their new campus community and have become functioning members within the culture. When this occurs, the students ideally are less likely to drop out.

Tinto's model provides serious implications for both campus retention efforts and retention research. First, if dropout is viewed as a process as Tinto suggests, retention must be viewed as an outcome of a process that a student is working through and not a goal in and of itself (Provost & Anchors, 2003). Secondly, the appropriate focus of retention efforts needs to be on the interaction of the student with the total environment. The greater degree of student interaction with the academic and social worlds of the campus, the better chance the student will persist. It seems necessary to maximize the fit that students experience with the campus environment. Third, we must view retention as a total campus responsibility, in that everyone who works with the student at the institution has a role in the retention effort (Provost & Anchors, 2003; Noel, 1976). A fourth implication of viewing dropout as a process is that when gathering useful information about students, one must consider a broad array of student characteristics (Provost & Anchors, 2003). Research regarding retention needs to involve as many characteristics as possible prior to enrollment as well as after the student has arrived on campus.
Liu and Liu (2000) investigated the effects of satisfaction upon retention of students based on Tinto’s theory. They drew a sample from 1,606 entering freshman at a comprehensive state university. Satisfaction data were collected through a survey questionnaire that was sent to students during the spring term and later matched with students’ academic transcripts and academic status. This particular study found that academic performance and academic integration contribute to student persistence, but that social integration has little effect on whether a student will persist at a college. This study partially validated Tinto’s theory. In a higher education setting, grades influence (academic) integration and satisfaction, which ultimately determines whether a student chooses to stay or leave (Liu & Liu, 2000).

Tinto (1975) also reports that out-of-class contact between faculty and students has particularly powerful effects on the persistence of students who are “withdrawal prone” (Tinto, 1975). Tinto offered a similar observation in a later book: “Institutions with low rates of student retention are those in which students generally report low rates of student-faculty contact. Conversely, institutions with high rates of retention are most frequently those which are marked by relatively high rates of such interactions” (1987, p. 66).

A final implication of Tinto’s theory of integration suggests that we need to have research that is longitudinal in nature. Information must be gathered over time and the institution needs to set up regular systems to monitor the types of integration that the students experience.
Bean's Model of Student Departure

Bean (1980) developed the Model of Student Departure, a psychological process model, which he used to explain the factors that contribute to student attrition. Tinto (1993) described Bean's work as follows, "[the] central tenet has been that departure is as much, if not more a reflection of institutional behavior as it is of the individuals within the institution" (p. 89). Bean's model (1980) identified variables that represent a student's interaction with the college or university. The results of Bean's (1980) study produced eight elements in reducing student attrition, which include: background characteristics, a student's interaction within the campus environment, quality of the student's experience, grade point average and the value of recruiting and orientation programs (Bean, 1980). Bean's model was patterned after an organizational turnover model, which was developed to assist in the process of employee turnover. His findings indicated that institutional quality and different opportunities for men and women were the two most influential variables influencing commitment. Bean found that women who were satisfied were more committed to the institution than men (McClanahan, 2004). Bean earlier had confirmed that faculty-to-student contact outside of the classroom is strongly correlated with student retention (Bean, 1981). In these research results, Bean's studies "provide evidence that student interactions with faculty and lack of student involvement on campus (due to off-campus employment) play important roles in the persistence process" (Berger & Milem, 1999).

Bean and Eaton (2002) developed a psychological model of college student retention that represented the importance of the institutional provisions for service learning, freshman interest groups and other learning communities, freshman orientation
programs, and mentoring programs to support student success. The model presents four theories: attitude-behavior theory, coping behavioral theory, self-efficacy, and attribution theory. Institutions need to address student needs for social and academic involvement by developing programs that assist students in developing skills and a positive self-image (Bean & Eaton, 2002). Growth in these skills should help students with the academic and social pressures that occur during the college years.

Astin's Theory of Student Involvement

Astin (1993) focused on the student's background characteristics and the student's involvement with various aspects of the campus environment as factors in retention. Student involvement has tremendous potential for enhancing most aspects of cognitive and affective development (Astin, 1993). Astin determined that peers are "the single most potent source of influence" (p. 398). According to Astin (1985), "student involvement" refers to the amount of physical and psychological energy that a student devotes to the academic experience. The highly involved student is one who devotes considerable time and energy to studying and who spends a lot of time on campus. This is a student who participates actively in student government activities and interacts frequently with the faculty, staff, and other students. Conversely, an under-involved student may neglect studies, spend little time on campus, abstain from extracurricular activities, and has little contact with the faculty, staff, and students. The core of this theory is that students learn by being involved; the most precious institutional resource may be student time. The extent to which students are able to develop their talents in college is a direct function of the amount of time and effort they devote to activities designed to produce these gains. Astin's (1993) later work was an empirical study of his
earlier model. He found that there are three primary factors that form important relationships for students. The three factors are: academic involvement, involvement with faculty, and involvement with student peer groups. Astin (1993) concluded that variations in student-faculty contact within any given institutional environment can have positive implications for student satisfaction and student development (Astin, 1993). A comparison of the faculty, curriculum, institutional type and peer group effects led to findings which concluded that the peer group was the single most potent source of influence on student growth and development during the undergraduate years (Astin, 1993).

*Tinto’s Theory Revised for the Residential Campus*

Braxton, Hirschy, and McClendon (2004) recommended a revision to Tinto’s Theory of Integration for residential colleges and universities. They introduce the need to identify antecedents to social integration. In summary, this revision recommends that student characteristics shape the student’s initial commitment to the goal of attaining a degree (Braxton & Hirschy, 2005). Entry characteristics include the student’s gender, racial or ethnic background, socioeconomic status, the student’s academic ability, high school academic preparation, parental preparation, and the ability to pay for the education received. The greater the student’s initial level of commitment to the college or university, the better chance the institution has of the student persisting (Braxton & Hirschy, 2005).

There are two psychological dimensions mentioned in this theory. They are proactive social adjustment, which refers to the student’s propensity to approach the demands and pressures of social integration in a positive manner, and psychosocial
engagement, which is the level of psychological energy a student devotes to his or her interactions with peers and to involvement in activities at the college that the student has chosen. The student's level of commitment to the institution is critical to the student's levels of proactive social adjustment and psychosocial engagement (Braxton and Hirschy, 2005; Seidman, 2005).

This theory offers several antecedents to social integration. According to Braxton and Hirschy (2005), "social integration refers to the extent a student perceives a sense of normative congruence and social affiliation with members of the social community" (p.72). Students' perceptions of the organizational constructs will affect their level of social integration. Students who perceive that campus policies and practices are incongruent with the institution's mission and values may feel dissonance with the campus community. When students feel that faculty, staff, and administration value and respect them as students they are more likely to connect with the community. Social integration will ultimately stem from a student's commitment to the community, which will focus on the student's assessment of how he or she has found meaning in the relationships available to him or her on campus (Braxton & Hirschy, 2005).

The final two concepts to consider with this theory are the student's ability to pay and the student's initial commitment of a goal of degree attainment. Students who are satisfied with the costs of attending their institutions are more likely to persist than students who suffer from on-going financial difficulties (Cabrera, Nora, & Castaneda, 1992). It is important to relieve financial stress that the student is feeling in order to retain the student. Students at residential campuses who display a high level of commitment in the social aspects of the campus and who display a high level of commitment to obtaining
a degree are likely to persist (Seidman, 2005). This theory connects the social integration of the student and the student’s initial commitment to the institution as keys to success in retaining the student.

Variables that Impact Persistence

Research has uncovered a variety of reasons why students leave an institution before graduation or even before their sophomore year. The literature indicates that a student can have a positive successful college experience if he or she chooses the college carefully and if the institution chosen is compatible with his or her unique characteristics (Seidman, 2005). If the college provides a structure for the integration of the student academically and socially, the student has a higher likelihood to persist (Tinto, 1988). Positive experiences and interventions will reinforce persistence by heightening individual intentions and commitments. However, negative experiences will weaken the intentions and the commitments of students, which may lead to the student leaving an institution. Institutions need to know all they can about a student prior to enrollment and as soon after enrollment as possible in order to assist the student to persist (Glynn, Sauer, & Miller, 2003).

Characteristics that Impact Student Connection and Fit at Church-affiliated Christian Colleges

Adjusting to life at a church affiliated Christian college can be especially difficult. Those who select a private church affiliated college undergo a process of “religious fit” (Williamson, 2002). In order to better retain the students at these private colleges, it is necessary to understand the context and environment in which these students function. Because private institutions are unique in their mission and focus, students who attend these institutions may face greater challenges of adaptation and connection. It is critical
that students at church affiliated private institutions adapt to the new set of values and expectations that exist (Robinson, 2000).

A study was recently completed which sought to evaluate religious fit and retention of students at Christian colleges. The study was developed to assess religious institutions and student retention for new students at 49 Christian institutions (Forbes, 1998). After students from the institutions completed a questionnaire developed by the researcher it was determined that there are 10 variables of significance that relate to a student’s intent to stay at a particular institution. The variables included in the study were: institutional fit, loyalty, practical value of an education, encouragement from family and friends and religious growth (Forbes, 1998). All 10 variables included in the study have a significant effect on whether a student stays or leaves a religious institution.

Because of the small size of many of these institutions, resources need to be focused to develop programs that can assist new students in the adaptation to the environment. Student affairs professionals expend enormous amounts of creative energy devising ways to get or keep students involved (Barefoot, 2000). Time spent socializing with friends is positively related to gains in orientations toward learning for self-understanding. Academic and non-academic experiences both separately and jointly shape student learning (Nora, Pascarella, Terenzini, & Springer, 1995).

Financial Concerns

Students will often report financial difficulties as a reason for leaving college. Financial concerns such as financial aid, jobs on campus, and other financial related issues are often legitimate concerns, especially at private colleges where the tuition is greater than at public universities or community colleges. Because of the enormity of the
investment in a college education, it is not surprising that finances surface as a primary concern for many students and their families (DesJardins, Ahlburg, & McCall, 2002; Upcraft et al., 2005; Kerkvliet & Nowell, 2002; Wilcox, 1991).

Some researchers view financial concerns as external to motivation. In a recent study, evidence was found that indicated that receiving some form of financial aid assisted in the facilitation of social integration of student (Cabrera, Castaneda, & Nora, 1992). Students who received some financial aid assistance did not feel the need to secure jobs. This then allowed students some freedom to engage the campus socially and not feel need to work as much as other students (Cabrera et al., 1992).

A study of first-year college students examined academic performance and financial aid and their impact on first generation college students persisting into their sophomore year of college. Participants in the study included students from three Christian colleges and the findings indicated that first-year GPA and total financial aid was positively correlated to retaining these students (Green, 1998).

Other research demonstrated that students who were satisfied with their ability to pay for college had higher aspirations and higher chances to persist in college (St. John, Cabrera, Nora, & Asker, 2004). Because of the increase in tuition of many colleges and universities, students have come to depend on financial aid and loans as primary means of financing their education. Students who attend private colleges are more likely to receive aid than students who attend public institutions. Students in private institutions are also more likely to receive loans (Schuh, 2005a).

Studies indicate that financial aid and assistance clearly reduce economic obstacles for students obtaining a postsecondary credential (Pascarella & Terenzini,
2005). What recent studies have done is inform administrators at institutions that financial aid is doing what it is intended to do, and that is to facilitate both the academic and the social integration of the student as well as influence his or her commitment to finish their education at one institution (Cabrera et al., 1992).

**Academic Performance**

Tinto (1975, 1993) and Bean and Eaton (2004) link college retention to both past and present academic performance. Tinto believes that pre-college education interacts with and directly influences a student's commitment to the institution and influences a student's academic goals. Institutions that enroll students with the highest prior academic achievement have the highest retention rates (Bean, 2005). It has been documented that high school grade point average and ACT scores are related to college retention. The higher the student's academic competence, the better the performance and the greater likelihood of that student staying in college (Lotkowski, Robbins, & Noeth, 2004).

A low GPA has a negative effect on retention; students who fail academically are sometimes asked to leave the institution (Okun & Finch, 1998; Moore, 2006). When this occurs, both the student and the institution lose. Grades may be the single best predictor of student persistence, degree completion, and graduate school enrollment (Pascarella & Terenzini, 2005). Academic achievement during a student's first year of college may be a powerful influence on whether or not a student persists further in his or her education.

Difficulty in the classroom is only a small part of academic problems. Other issues may be the cause of student attrition. Bean (2005) believes that students leave because of low academic challenge, because of poor advising methods or because the institution does not have the major that the student is interested in pursuing. Regardless
of the reason, the importance of the effects of academic performance on attrition and persistence should not be underestimated.

**Personal Reasons**

There seems to be an easy catchall phrase for those students who choose to withdraw for non-academic or financial reasons and it encompasses everything from homesickness, family member illness, moving home to get married, or lack of motivation. That phrase is “personal reasons.” Some of what are termed “personal reasons” may have to do with student expectations. Students entering college with highly unrealistic expectations about the environment are most likely going to have problems adjusting to the campus and are more likely to withdraw than the students who have set realistic goals and expectations (Bebergal, 2003).

**Unknown Reasons**

Despite the extensive literature on attrition and persistence in higher education, much remains unknown about the nature of the process of persistence (Seidman, 2005). Tinto stated “I believe the multiple characteristics of dropouts can be traced to two major shortcomings; inadequate attention given to the question of definition and to the development of theoretical models that seek to explain, not simply to describe, the processes that bring individuals to leave institutions of higher education” (Tinto, 1975, pg. 89). Students drop out for a variety of reasons, and institutions that pursue the students after they have dropped out will have a difficult time obtaining valuable data. Students are either unwilling to provide feedback or have moved on in their decision making process after choosing to leave an institution. Therefore, asking students to
participate in surveys and exit interviews may be met with resistance. This creates a void in understanding the real reasons why a student made the choice to leave the institution.

Retention Strategies

Colleges and universities have created many programs directed at increasing student retention. Among these are orientation programs, early alert systems to identify "at-risk" students, first-year experience programs and creative advising programs that are designed to improve contact with members of the faculty. Most institutional leaders would agree that campus efforts to retain students who enroll are just as vital to enrollment strategy as efforts expended in attracting students to the institution. Astin (1975) suggests that it is more cost effective for an institution to spend money on student retention than to spend it in student recruitment. Retention management can be a measure of an institution's success and is a measurement of how satisfied students are with their college experience. The first-to-second year attrition rate is an important determiner of an institution's graduation rate (Upcraft et al., 2005). The following strategies outlined in the literature may assist in the process of identifying and retaining students who are at-risk for attrition.

An Institutional-Wide Effort

Campuses need to prioritize a retention improvement agenda. Tinto believes that "at the core of an institution's educational mission" (1993, p. 146) should be the belief that commitment to retaining students is everyone's business. Tinto writes, "Commitment to students generates a commitment on the part of students to the institution" (p. 146). A retention program requires commitment from the senior management, and a broad based, all-inclusive college community committee (Noel, 1976; Seidman, 2005). Noel stated,
“Improving the academic and social integration of student and institution is the surest way to improve retention” (p. 1). A concentrated effort by the whole campus to increase retention is one of the first strategies in improving student persistence (Noel, 1978).

According to Tucker (1999), Tinto’s theory leaves institutions with a number of principles to implement and develop;

1. Institutions should ensure that new students enter with or have the opportunity to acquire the skills needed for academic success.
2. Institutions should reach out to make personal contact with students beyond the formal domains of academic life.
3. Institutional retention actions should be systematic in character.
4. Institutions should start as early as possible to retain students.
5. Students should be the primary commitment of the institution.
6. Education, not retention, should be the goal of institutional retention programs.

These principles challenge the institution and are offered as guidelines for student transitions into college life (Tucker, 1999).

*Orientation Programs*

Orientation programs are critical when considering retention because of their socialization function (Pascarella & Terenzini, 2005). These programs should be designed to facilitate the smooth transition of students into the academic atmosphere. The best orientation experiences occur when the whole campus is involved (Smith & Brackin, 2003).
One of the most important steps in the retention process begins the first week students are on campus. Orientation programs are the best opportunity for students to become familiar with the facilities and the surrounding community in which the campus resides (Upcraft et al., 2005). The orientation program should assist parents in leaving their student on campus as well as in observing first hand the complexities, demands, and services of the college environment. Orientation programs are a great opportunity for the institution to become more familiar with its new students and can be a perfect point at which to conduct research and collect baseline data to help the institution better retain incoming students (Upcraft et al., 2005).

According to Mullendure and Banahan (2005), orientation programs should do a number of important things. First, they should help students succeed academically. Secondly, they should assist students in their adjustment to and involvement with the college. Third, they should be designed to help parents understand the complexities, demands, and services of the campus environment. Finally, they should be opportunity for learning in both formal and informal settings (Mullendore & Banahan, 2005).

Virtually every college and university has some kind of orientation program that is designed to assist in the transition of the first year student. Orientation programs can provide a solid foundation for students to interact with one another and begin their transition away from home. Designing these programs can be a complex and challenging process, but it is clear that orientation programs that are successful have a part in the persistence of the first year student (Braxton & Mundy, 2002; Gass, 1990).
Recruiting the “Right” Students

The period between the mid-1950’s and the beginning of the 1970’s was the best of times for the private liberal arts college. During this time the private college saw rapid 20% growth, which resulted in rapid expansion (Carnes, 1977). Retention was not an issue administrators concerned themselves with. The competition to recruit and retain students has become a great challenge and an ever-present reality in recent years. Because of the many choices of colleges for young people to attend, institutions have to recruit with retention in mind. The concept of institutional fit has been shown to be a key to retention (Pascarella & Terenzini, 2005; Tinto, 1975, 1993). The ability of an institution to recruit the “right” students could be a major help in retaining students. Maguire and Lay (1981) feel that institutions need to determine how accepted applicants view the institution. Perceptions need to be accurate. If student perceptions are inaccurate, the institution should develop ways to clarify for incoming students what the institution has to offer. Gelin and Jardine (1990) claim that if an institution wants to be an institution of first choice students need to know about the college and what it can offer them. It is clear that the process of recruitment and retention are interrelated. A good recruitment program can translate into a good retention process (Seidman, 1989). The institution needs to market itself accurately and draw in students who “fit” at the school. Students who begin their college career with a strong intention to complete their degree at that particular institution will find a way to achieve the goal.

Early Identification of “At Risk” Students

Many colleges and universities have initiated programs that are focused on early identification of students “at risk” for dropping out. These programs need to begin prior
to the student’s matriculation on campus (Glynn, Sauer, & Miller, 2003). The retention management program at a given institution needs to start at the earliest possible time identifying the “at risk” students who are entering an institution. This can be done using specific data that has already been collected or reviewing the profile of past unsuccessful students. Items to look for prior to enrollment are essays, standardized tests scores, college assessment of academic goals, personal goals, parents’ educational attainment, socio-economic level, and family structure (Barefoot, 2000; Braxton, 2000). Early warning systems enable campus administrators to recognize students who enter college most likely to drop out. This will help administrative teams implement intervention strategies before the student makes a final decision to leave. After the student has enrolled, it is important to intervene as early in the semester as possible, using faculty knowledge of student behaviors in the classroom such as poor attendance or lack of participation to help identify “at risk” students (Seidman, 2005). Personality instruments (like the ones used in this study) can provide information to better assess the students’ needs and then connect them with individuals who can provide assistance. Student development staff needs to be trained to help detect roommate problems or signs of psychological or disruptive behavior that surface in the residence halls, or any other problem that may identify a potential dropout. When “at risk” students are identified, it is urgent that interventions occur quickly with proper diagnosis and proper follow up.

Importance of the First Year

The freshman year has been universally considered significant in the persistence of students (Barefoot, 2000; Barefoot et al., 2005; Bebergal, 2003; Fulcomer, 2003; Pascarella & Terenzini, 2005; Seidman, 2005; Tinto, 1993). Because of this
overwhelming evidence, it is critical that college administrators make the first year experience of students a priority. It is the institution's responsibility to help its students succeed (Upcraft et al., 2005). There are many keys to first year student success, but it is important to understand that every institution is different and unique. Institutions must develop initiatives that are consistent with their mission, resources, students, faculty, and any other characteristics unique to the institution.

One program that is critical is the first-year seminar class (Barefoot, 2000; Upcraft et al., 2005). This is a class developed within the institution to assist students to better understand the campus culture to enhance academic interest and provide opportunities for social integration into the life of the campus (Upcraft et al., 2005). The class should provide the student with a series of innovative and active learning activities that seek to engage the student with peers, the campus community and the broader community (Walters, 2003).

Research conducted at a public university in Indiana suggested that the most valuable aspects of the first-year seminar course taught at the university were: (a) having the opportunity for interaction with other students, (b) having regular contact with advisors and faculty members, (c) learning to meet the demands of college, and (d) gaining an understanding of available campus resources. This research also showed that students who participated in the class were retained at a significantly higher rate compared to non-participating students (Tobolowsky, Cox, & Wagner, 2005).

Another method of encouraging persistence of first year students is to "front load" resources and activities for the first year student. This is encouraged in order to help the
student connect with the institution and be assured that they can succeed into their second year of college.

**MBTI as a Retention Tool**

A tool often used during the first-year of college or in the first-year seminar class is the Myers-Briggs Type Indicator (MBTI). The MBTI is perhaps one of the most popular measures of personality available today. Over 12 million people have taken the MBTI and it has been translated into at least 30 languages (Aviles, ND; Lawrence, 1996). The MBTI has been utilized for management, team building, college retention, understanding learning styles, marriage counseling, and leadership training (Anchors, Gershman, & Robbins, 1987; Cody, 1995; Fitzgerald & Kirby, 1997; Lawrence, 1996; McCaulley, 1976).

The MBTI was developed over a twenty-year period; and was first validated for research purposes by Educational Testing Service (ETS) in 1962, but not widely circulated until Consulting Psychologist Press began to publish the MBTI in 1975 (Resources, 1995). Katherine Briggs and Isabel Myers developed the Myers-Briggs Type indicator to make Jung’s theory of psychological types understandable and applicable in predicting personality preferences (McNeil, 1991). Refined and improved over the years, the MBTI has become a tool for identifying the 16 different patterns of action into which every person fits.

The MBTI is based on Carl Jung’s theory of personality (McCaulley & Myers, 1985). Jung believed that individuals possessed four dichotomous dimensions of personality. The four dimensions of personality involve how individuals interact with the world (e.g., Extraversion versus Introversion), gather information (e.g., Sensing versus
iNtuition), process information (e.g., Thinking versus Feeling), and make decisions (e.g., Judging versus Perception).

The four personality types are non-judgmental and there are no "rights and wrongs." Individuals will possess both aspects within each personality dimension. However, individuals may find that they utilize preferred aspects more than non-preferred aspects. The MBTI was created to help individuals to recognize that there are preferences within the four dimensions of personality (McCaulley & Myers, 1985).

Individuals may be required, based on a situation, to use all preferences. This is not an issue of "good or bad," but an issue of being able to be flexible in any given situation. Dissatisfaction may occur if an individual must continually use least preferred or least developed functions (Aviles, ND). Table 2 offers a deeper description of the dimensions of the MBTI.

<table>
<thead>
<tr>
<th>MBTI Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion</td>
<td>Prefers external world of people and things to internal world</td>
</tr>
<tr>
<td>Introversion</td>
<td>Prefers internal world of ideas and feelings to external world</td>
</tr>
<tr>
<td>Sensing</td>
<td>Prefers to gather data using the five senses.</td>
</tr>
<tr>
<td>iNtuition</td>
<td>Prefers to gather data by sixth sense and use of intuitive hunch.</td>
</tr>
<tr>
<td>Thinking</td>
<td>Prefers making decisions based on use of logic and analysis.</td>
</tr>
<tr>
<td>Feeling</td>
<td>Prefers making decisions based on emotion and personal and subjective values.</td>
</tr>
<tr>
<td>Judging</td>
<td>Prefers to be decisive, planned and orderly.</td>
</tr>
<tr>
<td>Perception</td>
<td>Prefers flexibility and the ability to be spontaneous and adaptable.</td>
</tr>
</tbody>
</table>


The MBTI has been used to define particular personalities and this has helped institutions discover correlations between a student's personality and type and his/her persistence in college. A study done by Judith Provost (1985) of 1400 full time students,
most of whom entered college immediately after high school, identified certain MBTI
types that are least likely to persist to graduation. The personality types that this study
identified as high risks are ISTP, ESTP, and ISFPs. This study found that SPs are at risk
and that Es with high involvement in campus life seem most likely to persist (Provost,
1985).

A collaborative study by Anchors, Gershman, and Robbins (1987) of first-year
students entering the College of Arts and Sciences at the University of Maine for the
1982-1984 academic classes found that IPs and NPs were associated with academic
indecision. This is due to the belief that the judgment-perception scale reflects an
individual’s orientation towards closure. People with the preference for judgment often
prefer to live their life in a decisive, planned, orderly way aiming to regulate and control
events. Those with the preference for perception will live life with a more spontaneous,
flexible way of identifying life and controlling tasks (Anchors et al., 1987). Thus the
Judgment-Perception scale of the MBTI may provide valuable information in
understanding how a college student makes decisions related to academic decisions.

A landmark study entitled the TRAILS (Tracking Retention and Academic
Integration by Learning Styles) project, had as its specific objective the use of the Myers-
Briggs Type Inventory in understanding the enrollment patterns of entering students at St.
Louis University. Each fall semester through the 1980’s, a large proportion of the
freshman class at the university completed the Myers-Briggs Type Indicator instrument.
The TRAILS project revealed that those in the nursing program who are “thinkers” and
also prefer “judging” are more likely to drop out of nursing than those who are “feelers.”
This would suggest that the Thinking-Feeling dimension is connected to academic
success in the field of nursing. The TRAILS project also suggested that students with the IF type are at risk in the business program, and those arts and sciences students who prefer INFP and ENFP are at risk of dropping out prior to completion of their academic program (Provost & Anchors, 2003). The data suggests that MBTI can be a valuable tool in predicting dropout of students. This research also encourages institutions to make use of the MBTI instrument by implementing action strategies to assist students in their academic pursuits after identifying their MBTI preferences.

A study of entering freshman by Fremont (1998) at a University in northeastern Pennsylvania, found that those who had an MBTI preference toward perceiving (P) had a statistically significant correlation with the variable of “dropout proneness” upon completing the CSI (College Student Inventory), and were more likely to drop out. All other MBTI (E/I, S/N, and T/F) poles and the variable of dropout proneness showed no statistical significance. This study demonstrates that, in the community in which this research was conducted, those students who order their lives in a perceiving (P) way were at high risk for academic difficulties and academic stress (Fremont, 1998).

Another recent study by Baudouin and Uhl (1998) was conducted at the only French-speaking University in the province of New Brunswick, Canada. The 338 students who agreed to participate in the study were first-year students who had entered college directly after high school. This study found that Ss, SFs, and ESFPs were significantly over represented among students who did not persist from the first to the second year of college. This study suggested that the J-P dimension is related to satisfaction and commitment in that students who have Judging as a preference scored higher than students who preferred Perception. These results support a study that was
conducted by Schurr and Ruble (1988), which found that the J-P dimension is a strong predictor of college performance. An earlier study by Schurr and Ruble (1986) of an entire entering college freshman class demonstrated that for Extroverts and Sensors; Judging and Perception are similar in aptitude, but Js tend to achieve more. People who prefer a perceptive approach, and people who prefer extraversion, tend to perform less well academically than people with the judging and introverted preference (Schurr & Ruble, 1986).

Personality type successfully predicted attrition in a study at Georgia Tech University in their engineering program. The study consisted of 195 students who were given the MBTI and had their attrition and performance monitored in a specific pre-engineering course. This study found that of the 26 students who withdrew from the class 25 were Es, Fs, or both (Thomas, Benne, Marr, Hume, & Thomas, 2000). This study indicated that extraverted feelers would not be a good fit for a career in engineering. There has been a recent study in which MBTI type did not produce significance when trying to predict student success and retention in an introductory recording studio techniques course in a community college (Van Regenmorter, 2004). It has been difficult to locate studies in which MBTI type did not produce any favorable significance.

Reliability of the MBTI has been established using data from many sources such as gender, age, education, achievement levels, as well as on the strength of individual preference. The Center for the Application of Psychological Type (CAPT) has a database with research and scored MBTI's exceeding 250,000. It appears that the MBTI has sufficient internal consistency. Split half scores for the four codes range from a low of .83 for the extroversion/introversion scale, to a high of .87 for the judging/perception scale.
The test-retest score of the MBTI range from .71 over a two-week period to .48 over a two-year period (McCaulley & Myers, 1985).

The validity of the MBTI is determined by its ability to demonstrate relationships and outcomes predicted by theory. The validity of the MBTI was established by correlating MBTI scores with the results from several different personality measures and vocational interest inventories. In many cases the MBTI showed moderate to statistically significant correlations consistent with the personality constructs that are measured by the other instruments (McCaulley & Myers, 1985). Carlyn (1977) summarized several studies on content and construct validity and found that the MBTI scales were consistent with Jung’s theory (as cited in Burns, 1985, p. 53). The conclusion was that the MBTI is reasonably valid.

The (MBTI) has been used in a variety of settings in establishing relationships between type and academic achievement and academic major selection, as well as attrition and dropout rates (Anchors et al., 1987; Burns, 1985; Kalsbeek 1986; Nisbet, Ruble, & Schurr, 1982; Provost, 1985; Rigley, 1993). In researching this study, the intent was to be critical, however, this researcher, after extensive searching in on-line resources such as Psych Info and ERIC, found very little research refuting the studies shared in the previous paragraphs.

Faculty and Student Interaction as Retention Strategies

A substantial body of literature exists on how students change and develop during the college years, as well as on what college experiences create change and shape those changes in students (Pascarella & Terenzini, 1991). Many of these experiences happen outside of the classroom and are influenced through student to faculty interaction.
Interaction with students is critical in helping learn to think critically and help learn to problem solve. This interaction occurs both inside and outside of the classroom. As a result, faculty members often become role models, mentors, and guides for lifelong learning (Kuh et al., 2005). In addition to having strong instructional skills, the most successful faculty are accessible to students outside of the classroom (Astin, 1993; Blimling, Pascarella, & Terenzini, 2004; Kuh et al., 2005; Pascarella & Terenzini, 1991, 2005; Whitt, 2004). This is especially true at small faith-based liberal arts institutions where those who attend the institution expect informal connection with the professor and student. This is because of the size of the institution (Bean, 2005).

Other research has demonstrated the importance of involvement of faculty members during the first-year of college. Recent literature has indicated that faculty support is essential in the development and the implementation of first-year programs (Barefoot et al., 2005). Findings suggest that institutions where faculty engage students in and out of the classroom had students who felt supported and were active participants in their learning (Umbach & Wawrzynski, n.d.). Another study found that the greater the student's level of integration into the social and academic environment, the greater the commitment to the institution (Boylan & Bonham, 1992). A more recent study by Johnson (1997) discovered that the academic climate is the variable around which efforts should be made. The findings suggested that faculty-to-student interaction is an important area in which to focus (Johnson, 1997). In a study by Harth and Starke (2001) found that student relationships with faculty through a college seminar course were significant to student retention. Students who took the course felt more comfortable with faculty, interacted more with faculty outside of the classroom and consulted more with faculty
than those who did not take the course. This study found that the bonding with faculty within the first-year college seminar course was foundational to student retention (Harth & Starke, 2001).

There are many methods in which faculty-to-student interaction can occur. Methods such as advising, mentoring, visiting a faculty member’s home or simply connecting with a faculty member during office hours are opportunities for this relationship to develop. Technology has opened the door to timeless feedback through e-mail. No matter what the venue, effective retention programs focus on the integration of all students into the social and academic communities of a college or university. This process will no doubt forge bonds among and between students, faculty, and staff of the institution (Braxton & Mundy, 2002; Tinto, 1993).

**Student Residential Living**

Studies that occurred prior to 1990 that explored the influence of residence halls on student persistence found that living in residence halls increases the likelihood of persistence and degree completion (Upcraft & Gardner, 1989; Pascarella & Terenzini, 2005). Many of the studies centered on a new residential concept called a Living Learning Center (LLC). The research supported these communities until the early 1990’s. Studies since 1990 have produced a slightly different picture. Pike, Schroeder & Berry (1997) found that living in a LLC had no direct effect on persistence into the second year, but that living in such a residence did have an indirect effect on student-faculty interaction.

On-campus residential living allows students to fully integrate themselves into the campus environment. Living on campus gives the student an increased opportunity for
student-to-student interaction (Bebergal, 2003). The residential experience can be life changing, but it should manifest the following characteristics: student-to-student interaction; faculty-to-student interaction; quality study environments and significant hours devoted to study and social opportunities for students (Zeller, 2005). There have been several researchers who have suggested that the reason that residential hall students have a more positive experience is the opportunity for social context within the residence halls (Peltier, Laden, & Matranga, 1999). They suggest that institutions that are concerned with first year college student attrition should maintain strong extracurricular activities and emphasize the benefits of residential living.

A review of the evidence of student persistence can be very helpful in helping institutions make program changes and decisions. Another area of potential change and improvement is academic advising. High-quality advising can have a significant positive impact on persistence transmitted through its positive impact on such variables as grades and student satisfaction (Upcraft et al., 2005). This study is designed to take a comprehensive look at advising strategies and how they impact student persistence.

Advising Strategies

Research consistently indicates that academic advising plays a role in the students' decisions to persist and in their chances of graduating (Beal & Noel, 1980; Seidman, 1991). Academic advising is the only structured activity on campus in which students interact one-on-one with a concerned faculty or staff member from the institution. While academic advising is not solely responsible for retention rates on campus, academic advisors can play a significant role in helping students think through sound educational and career plans based on their interest, values, and abilities (Upcraft.
et al., 1995). Habley (1981) offered that academic advising remains the most significant mechanism available on most college campuses for coming alongside students and helping them adjust to college life and eventually leading them to graduation. The person best placed in the college or university for intensive and continuous intervention is the student’s advisor. Students in four-year private colleges and universities place high value on academic advising (Noel & Levitz, 2004a). In studies related to advising and attrition, it seems clear that advising is one of the most effective support services in the student’s early college years (Pascarella & Terenzini, 2005).

According to Habley and Gordon (2000) there are four predominant models of advising for undergraduate students. The first is the full time faculty member who, while teaching a full load, tries to meet the demands of the many student advisees who seek attention. This kind of advisor has knowledge in the academic arena related to the content of courses, but may have limited knowledge in the area of student development.

A second type of advisor is the professional full time advisor. This advisor is often more accessible to students and often more knowledgeable of student development theory. A third type of advisor is the peer advisor. This advisor is often very accessible to students, but will often not possess the knowledge necessary related to course offerings and content. While advising may be a priority, there will always be difficulty in balancing the advisor and student roles. The fourth model of advising is the Para-professional model. These are individuals who are generally educated with at least an associate’s degree and have proven to be economical. Para-professionals are often most successful when used in conjunction with a faculty member (Upcraft et al., 1995).
Within the literature on advising two models have been discussed related to advisor/student relationships. Both models were described by Crookston (1972) and later Fielstein (1989), and defined the advisor's relationship with the student as either prescriptive or developmental. The prescriptive approach was seen as more traditional in an instructor who navigates and teaches the student in matters such as registration, deciding upon a major etc. The developmental approach is a more personal relationship between the student and the advisor. This approach assists students in achieving both academic and personal goals and involves developing a more personal relationship with the student where the students' background, personal attitudes and other student concerns are discussed (Crookston, 1972; Fielstein, 1989). While these models remain common and the developmental one remains the most widely used model, there is a new model in the literature that urges advisors to focus on a more strengths-based approach in their advising of students (Schreiner & Anderson, 2005).

Strengths-based Advising

Schreiner and Anderson (2005) have extensively studied the concept of strengths-based advising. In a recent article they define the strengths based concept as a "new lens for higher education" (p. 20) Based on research from higher education and the business world, strengths-based advising empowers advisors to identify and build on students' talents, which ultimately teaches students to develop and apply their strengths and talents to new and challenging learning tasks. The emphasis is placed on a student's natural talents and builds the confidence and motivation necessary for achievement and persistence in college.
Through the use of the Clifton StrengthsFinder™ inventory, published by the Gallup Organization, and the use of trained student development staff, the proposed research study seeks to supply additional research data on this approach to first-year student persistence. The Clifton StrengthsFinder™ inventory is a tool that has been linked to various positive outcomes (Hodges & Harter, 2005). The Clifton StrengthsFinder™ inventory is used as a part of the StrengthsQuest program, which is based on several years of research. Both the StrengthsQuest program and the Clifton StrengthsFinder™ inventory have been linked to academic success, improvement in the management of people in the corporate work world, and in the area of academic advising and career development (Clifton & Anderson, 2002; Buckingham & Clifton, 2001; Hodges & Harter, 2005).

Although research has shown that a strengths-based approach can increase student retention when applied to an action plan and implemented in an advising approach, this researcher believes more research is needed linking the Clifton StrengthsFinder™ inventory to the persistence of first-year college students (Anderson & Schreiner, 2005). If students can learn and understand their strengths with the help of a faculty advisor within the first few weeks of their freshman year, it may give them the confidence and motivation needed to persist into their second year of college. To date there is little research on either the StrengthsQuest program or the use of the Clifton StrengthsFinder™ inventory and its use in helping students persist into their second year of college.
Clifton StrengthsFinder™ Inventory

The Gallup Organization created the Clifton StrengthsFinder™ inventory to identify strength themes that exist in every individual. The Clifton StrengthsFinder™ inventory is a 60-minute, 180 paired item, web-based questionnaire. The assessment tool measures the presence of 34 themes, which can be defined as themes of talent. Each item lists a pair of potential self-descriptors. The descriptors are placed as if anchoring polar ends of a continuum. The Participants are asked to choose from the pair the degree to which each descriptor fits them. The participant is given a few seconds to respond to a given item before the computer moves on to the next item (Clifton & Anderson, 2002).

The Clifton StrengthsFinder™ inventory determines five key themes that may contribute to success in social and academic settings. Themes are determined by calculating a mean of the intensity of the self-reported trait descriptions. All the personal trait descriptions fall into categories neutral, agree, or strongly agree (Clifton & Anderson, 2002; Austin, 2005).

In a recent study involving college students from a wide variety of four-year institutions in the United States and the United Kingdom students were asked to complete the Clifton StrengthsFinder™ inventory and were not given their results. Twelve weeks later the students completed the Clifton StrengthsFinder™ inventory for a second time and 52% of the students in the sample had at least three of their top five themes remain the same. The study also demonstrated that 35% retained two of their top five themes (Clifton, Anderson, & Schreiner, 2006). The tool is not intended for employee selections.
or mental health screening (Clifton & Anderson, 2002; Austin, 2005; Lopez, Hodges, & Harter, 2005).

A recent study by Williamson (2002) with college freshman at a faith-based institution set out to determine if there was a significant difference in first semester student success between a study group of students introduced to strengths-based development and a control group who were not. A total of 32 students participated in the intervention group and 40 students participated in the control group. First semester student success at this study site was determined by completion of 12 credit hours of coursework at a 2.0 GPA or higher. The results indicated that only two (6%) students who participated in the strengths-based intervention group failed to meet the minimum requirements compared to eight (20%) of the 40 control group students (Clifton & Hodges, In Press).

A more recent study by Austin (2005) used a relatively large sample of 527 high school students at a suburban high school in southern California. The study was an experimental design and one of the intervention groups utilized the Clifton StrengthsFinder™ inventory to identify the students’ strengths. Students identified their strengths by participating in a 6-week course at the high school. The study discovered that the students who were in the strengths intervention group demonstrated statistically significant increases in self-perception, academic efficacy, positive academic behavior and extrinsic motivation.

It could be argued that if students could be helped early to apply and develop their strengths, they would be enabled to do more than one thing well. When students develop and apply their strengths, the first thing that increases is their confidence (Clifton &
Anderson, 2002). Self-confidence based on an awareness of their strengths could influence students to succeed. The research done in this literature review related to the Clifton StrengthsFinder™ inventory was intended to be a critical review of the literature. After a thorough review of ERIC and other on-line libraries, this researcher could not find studies that refute the research discussed in this paper. One of the purposes of this study is to utilize the Clifton StrengthsFinder™ inventory with a randomized sample of first-year first-time students and attempt to assess the potential of a strengths-based advising approach in helping college freshman persist.

Summary

The preceding sections have summarized and synthesized the initial literature related to historical and foundational theories of student persistence and attrition in college primarily by Spady (1970), Tinto (1975, 1987, 1993), Bean (1980), and Astin (1993).

Further research has demonstrated that there are many academic and non-academic variables that may impact retention (Astin, 1993; Bean, 1980, 2005; Cabrera Et al., 1992; Habley & McClanahan, 2004; Pascarella & Terenzini, 2005; Tinto, 1993). Designing programs that will help students be more successful in completing their education is critical to the existence of small faith based institutions. Before any retention effort can begin, institutions need to create ways to identify students who need assistance and identify the kind of assistance that the student needs (Lotkowski et al., 2004).

Studies have identified relationships among personality types, advising, and student persistence. There continues to be a need, however, to evaluate non-academic variables and student persistence in college. It is believed that through the early
intervention of an advisor and assistance focused towards the integration into the campus, student retention can improve.

Additional research is necessary to identify with greater specificity and consistency the linkages among student characteristics, personality, time spent with faculty, and strengths based advising in order to assist students in their first-year of college.
CHAPTER III
METHODOLOGY

Although the topic of student retention has been studied extensively, much of the literature has been limited in that it is helpful in understanding the problem only in general terms. The literature has provided limited benefit to the small individual liberal arts institution in improving retention efforts. It is important for these institutions to utilize whatever tools are available to them to assess at-risk students and provide the resources and services necessary to all students meet their educational goals. Some variables that effect retention at some institutions may not effect other institutions.

This quantitative study was designed to determine if student retention is affected by student characteristics and personality, by extra attention from faculty through unstructured advising, or by the use of the Clifton StrengthsFinder™ inventory in advising with trained college student development staff. The information from this study will give administrators at a faith-based liberal arts institutions help in understanding what ways the MBTI, the Clifton StrengthsFinder™ inventory and creative advising methods assist in the persistence of first-year, first-time students. The study followed the freshman class of 2005 to determine which students persisted and which chose to leave the institution at the end of their first semester as well as who did and did not register for classes in anticipation of their sophomore year in college. This information was compared with the students' MBTI type and the type of advising they received.
This chapter reviews in detail the research design for the proposed study, including a description of the research design, study site, sample selection, experimental and intervention approaches, data collection, and analysis.

Research Design

Creswell (2003) indicates that quantitative methods are appropriate when identifying those factors that might influence a specific outcome or when testing a particular theory. Qualitative studies are appropriate when the researcher is exploring and isn’t necessarily able to quantify the existing variables (Creswell, 2003). McMillan and Schumacher (2001) identified the following characteristics of educational research: objectivity, passion, verification, parsimonious explanation (i.e. research should attempt to explain relationships among phenomena and to reduce the explanation to simple statements), empiricism, logical reasoning (both deductive and inductive), and conditional conclusions. Research is the systematic collection of data and analysis of that data for the purpose of gaining information about a phenomenon (McMillan & Schumacher, 2001). Applied research seeks to understand how basic research can help alleviate a demanding social problem and provides policymakers with well-grounded guides to remedial action (Miller & Salkind, 2002). A quantitative design was chosen for this study because many factors have been identified through the literature review as key variables in the implementation of a retention program. This study will be used to determine which practical methods can be employed to improve the first-year student persistence rate into the second year at a small faith-based liberal arts institution.

This study is an experimental design with a control group and two intervention groups (McMillan & Schumacher, 2001). The experimental design is a controlled design.
that randomly assigns participants to control and intervention groups. The experimental method is the best approach for determining the casual effect of an isolated, single variable on something (McMillan & Schumacher, 2001).

Study Site and Population

This study took place at Grace College, a small four-year, mid-western liberal arts faith based college located in Winona Lake, Indiana. Founded in 1937, the institution enrolled 872 students in the fall of 2005. The college is located in a small town of 4,235 residents (United States Census Bureau, 2005). A board of trustees operates the college which is the only college affiliated with the Grace Brethren Church. The college is a member of the Council for Christian Colleges and Universities (CCCU). The student body represents a number of states and foreign countries, however, 57% of the students are from Indiana. The college is moderately selective; entering first-year students have an average 3.46 grade point average on a 4.0 scale.

Grace College was chosen as the research site for a number of reasons. First, access to the student group was readily available to the researcher because of the researcher's employment relationship with the institution. The researcher works in the Office of Student Affairs at the College. Second, Grace College was willing to assist and cooperate in any way necessary with the researcher and the methodology of the study. Third, the institution has given significant attention to the topic of retention and persistence. The institution is interested in making changes to its many programs and is committed to improving its retention rate. It is the hope of the researcher and the institution that this experimental study will go beyond what Grace College has been able to ascertain in the past. It is hoped that exploring student involvement with the advising
process as well as the students' responses to the two instruments used in this study would influence retention. Such results will be helpful to both the development and the improvement of campus student services as well as serving in the retention efforts of other institutions.

A single institution study was chosen over a study using multiple institutions for various reasons. First, an experimental design means controlling for institutional differences, so a single institution is most appropriate. Second, retention researchers have encouraged the use of single-institution data because of the distinctiveness of institutions (Pascarella & Terenzini, 1991). Third, Grace College is attempting to establish itself and develop a “niche” in the conservative private college sector, and the results of this study will assist in developing an atmosphere that is friendly and customer focused. Fourth, a single institution study will allow the researcher to analyze data related to the individual students who participated in this study, which in turn will allow the institution to establish a baseline and continue with its goal of improving its retention rate. When institutions present specific data related to their particular institution, they can make specific changes to programs because the data is real and is not presented as abstract national norms (Dey, Berger, & Milem, 1997). This study is designed to contribute to both the field of retention management and to Grace College.

The subjects of the study consisted of first-year, first-time students who enrolled and matriculated to the institution for the first time. The sample used in this study was comprised of 191 enrolled out of a population of 217 first-year, first-time students at Grace College in Indiana. The study consisted of both residential and commuter students. The population is representative of the freshman class at this institution with
respect to gender, age, ethnicity and academic ability. The students who were selected were all enrolled in the Freshman Foundations class and took part in the institution’s freshmen orientation at the start of the semester.

Institutional retention trends at Grace College are noted in the table below. Over the past five years retention rates of the freshman cohort show numbers ranging from 183-244; there has been a wide range of retention rates over these years and the institution continues to be committed to finding answers as to why the retention rates fluctuate so dramatically.

Table 3

<table>
<thead>
<tr>
<th>Class</th>
<th>'00-'01</th>
<th>'01-'02</th>
<th>'02-'03</th>
<th>'03-'04</th>
<th>'04-'05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshmen</td>
<td>80%</td>
<td>80%</td>
<td>72%</td>
<td>73%</td>
<td>74%</td>
</tr>
</tbody>
</table>

All first year freshmen at Grace College are required to take Freshman Foundations, which is a 3 credit hour first year experience class designed to transition students from high school into college. The Myers-Briggs Type Inventory is part of the class requirements and is introduced as a regular part of the class within the first three weeks of the fall semester. At a subsequent class period all the students were given an informed consent document, which outlined the intentions of using their MBTI scores as part of this doctoral dissertation project. The researcher explained the study and passed out the consent forms during the regularly scheduled class period.

After explanation of the consent form and the research project, the researcher left the room, the consent forms were collected by the faculty member in charge of the freshman foundations class. All consent forms were locked in a file cabinet in a locked storage room in the student affairs office. Students who returned signed consent forms
indicating their willingness to take part in the study were randomized into a control and two intervention groups. Students who were under 18 years of age were not randomized for the study. Students who are under 18 years of age need a parental signature giving consent to be used in research. Because of work that would be required to obtain consent for those under 18 years of age, it was decided to ask them not to take part in the study. Signed consent forms were compared to institutional student data before the students were randomized and contacted to confirm that all were 18 years or older.

Data Collection Procedures

All first-year, first-time students were asked to complete the Myers-Briggs Type Inventory (MBTI) within the first three weeks of the beginning of the fall semester during the freshman foundations course as a normal part of their education. After consent was obtained, students who agreed to participate (n=191) were randomly divided into three groups, two groups totaled 64 and one group totaled 63. The randomization process occurred through the use of Excel. Students were coded 1-191 and then the researcher allowed the computer software to randomly choose the three groups.

The first group (control group) received regular advising meetings that are traditionally given at the institution. These meetings are usually geared towards the review of fall class schedules and the assigning of classes for the subsequent spring semester. The second group (intervention group 1) was asked to meet two extra times with a faculty member for the purpose of giving the student extra contacts with a faculty advisor to assist in connecting the student to the campus environment. The third group (intervention group 2) was asked to participate in taking the Clifton StrengthsFinder™ inventory, and to attend two meetings with a trained student development advisor of the
Clifton StrengthsFinder™ inventory. The two additional advising meetings were for the purpose of interpretation and discussion related to the themes that were identified when the students completed the Clifton StrengthsFinder™ inventory. The specifics of the control and intervention groups are explained below.

Prescriptive Advising (Control Group)

The control group (N=64) received the normal advising meetings during the fall semester, which included an introductory meeting when the students arrived on campus in the fall, and a meeting to schedule classes for the Spring 2006 semester. This is the institution's current advising process and replicates a more hierarchical (prescriptive) approach to advising.

Developmental Advising (Intervention Group 1)

Intervention group 1 (N=64) received two additional 30-minute advising meetings with a faculty advisor for the purpose of connection and social integration into the college community. The developmental approach to advising attempts to build a more personal relationship with the student (Crookston, 1972, Fielstein, 1989). The researcher met with the 10 volunteer faculty advisors prior to the advisors meeting with the students to inform them of the intent of the study and allow a time for questions and clarification. All details of the study were explained to the volunteer faculty advisors. These were colleagues volunteering to have extra contact with students under the literature-based belief that extra contact between faculty and students promotes student retention (Astin, 1993; Light, 2001; Pascarella & Terenzini, 2005; Tinto, 1993). Advisors were not given specific topics to discuss with the students in order to allow for advisor freedom and flexibility with the advising process. Advisors were asked to log their meetings on a log.
sheet (see attached Appendix D) supplied by the researcher and return the sheet to the researcher to account for the two 30-minute meetings that each faculty member had with the students.

The students in intervention group 1 were sent an e-mail invitation by the researcher explaining that they had been randomly assigned to intervention group 1 and further explaining their role in the study. This e-mail introduced the students to the faculty member who would contact them, and outlined the procedures afforded to them as a part of this group. The e-mail (see attached script in Appendix B) also stated that a faculty advisor would be contacting them for two additional meetings during the fall semester. Follow-up with advisors occurred through the completion of a faculty log sheet, which was for the purpose of verifying that the advising meetings took place. These log sheets were turned in to the researcher and secured in the researcher’s office in a locked file cabinet.

*Strengths-based Advising (Intervention Group 2)*

Intervention group 2 (N=63) was afforded the opportunity to complete the *Clifton StrengthsFinder™* inventory and participate in two 30-minute advising meetings with trained *Clifton StrengthsFinder™* advisors within the Office of Student Affairs on the Grace College campus. A *Clifton StrengthsFinder™* inventory trainer prior to the start of the research trained the advisors who participated in this intervention. The two 30-minute advising meetings were for the purpose of interpretation and discussion related to the themes that were identified when students completed the *Clifton StrengthsFinder™* inventory. This randomly selected group was sent an e-mail invitation by the researcher explaining their role in the study. This e-mail introduced the students to the advising staff.
member who would contact them (see attached script Appendix C), outlined the procedures afforded to them as a part of this group in the study, and included an entry code to the *Clifton StrengthsFinder™* inventory, which allowed student’s to take the online instrument. Follow-up with advisors occurred through the completion of a log sheet, which was for the purpose of verifying that the advising meetings took place. Any other notes were for advisor use and not intended as data in the study.

The groups were followed for the 2005-2006 academic year and persistence for each group was measured. Attrition data was collected at the end of the first semester and after the students registered in the spring of 2006 for the subsequent fall semester.

The Institutional Review Board/Human Subjects Review Committee at Western Michigan University was consulted and approval was obtained prior to the start of the research. All procedures were followed and all research met ethical and legal standards for the protection of the rights and welfare of the human subjects involved in this study.

**Data Analysis**

Prior to analyzing the data, the researcher coded the data for ease of interpretation. The following sections provide details of the coding and analytic procedures used.

*Demographic Variables*

Gender was coded as a dichotomous value, 0=male, 1=female. Ethnicity was categorized into four groups: 1= White, 2= Black, 3= Hispanic, 4= other. Student residence was coded as a dichotomous value 0= residential, 1= commuter. The student’s permanent residence was coded, 1= students living within two surrounding counties, 2= Indiana 3= Ohio, 4= Pennsylvania, 5= other.
**Myers-Briggs Type Indicator**

The type profiles of the MBTI personality tool were coded 0=ISTJ, 1=ISFJ, 2=INFJ, 3=INTJ, 4=ISTP, 5=ISFP, 6=INFP, 7=INTP, 8=ESTP, 9=ESFP, 10=ENFP, 11=ENTP, 12=ESTJ, 13=ESFJ, 14=ENFJ, 15=ENTJ.

**Study Variables**

The study variable indicated the group to which an individual student was randomly assigned. 0= Control, 1=Advising, 2=Clifton StrengthsFinder™.

**Dependent Variable**

One variable indicated whether individual students persisted into the second semester of their freshman year. A second variable measured which students persisted through the first semester and registered for classes for the subsequent fall semester. The dependent variable was coded 0=did not persist, 1= did persist.

Data were compiled using Statistical Package for the Social Sciences (SPSS). The program was used to calculate frequencies, descriptive statistics, chi square analysis and logistic regression.

**Data Analysis**

Descriptive statistics were calculated for all variables in the study, and initial exploration of the relationships among the variables was undertaken using Chi-Square analysis and Correlations, depending on the level of measurement of the variables.

Binary Logistic regression was used to determine the relationship between several independent variables associated with the MBTI types and to investigate if the advising approaches and the personality types influenced persistence. Binary Logistic Regression describes the relationship between a dichotomous dependent variable and a set of
explanatory variables. It allows the researcher to "control" for selected variables to determine the relationship between the remaining independent variables and the dependent variable. This is a common approach with experimental studies (McMillan & Schumacher, 2001). Demographic, personality, and advising variables were regressed on re-enrollment information to see if re-enrollment can be predicted.

An alpha level of .05 was used for all tests as the determinant of the significance of each predictor variable. This level of significance is frequently used in the social sciences and is typical with this type of analysis (Glass & Hopkins, 1996; McMillan & Schumacher, 2001). The institutional data were gathered and will be warehoused over time in a manner that is consistent with WMU HSIRB requirements.

Summary

This chapter describes the research design and methodology associated with this research project. This chapter specifies the design of the research, the setting where the study was conducted, the study sample, data collection procedures, the institutional data, and the analysis and testing performed in the study.

Three fundamental reasons appear to support the value of investigating the critical relationship between personality (through the use of the MBTI), extra attention from faculty advisors and motivation through the identification of five key themes in the Clifton StrengthsFinder™ inventory. First, the survival of small faith-based institutions depends on tuition paying students. Second, improving the institutional awareness of retention and using the data to improve institutional programs will help the college be better stewards of the students who attend the institution. Finally, at the time of this study...
there was limited research available using the Clifton StrengthsFinder™ inventory and its effect on the retention of first-year, first-time student’s.
CHAPTER IV
RESULTS

This chapter represents the results of the statistical analysis performed on the experimental design. In order to answer the research questions that guided this study, the following statistical analyses were performed to examine demographics of the sample and the six research questions. Descriptive statistics of the study sample are reported and examined. Frequencies of occurrence and percentages for the 11 categorical variables in the study are shown for the sample population. Chi-Square tests were used to analyze whether there were significant relationships among the categorical variables and the outcome variables. Phi or Cramer’s V was used to assess the strength of those relationship. In addition, Binary Logistic Regressions were used to predict the dichotomous outcomes of attrition or persistence, and to explore the relationships of the independent variables with each other and the outcomes. Regressions were calculated to determine which variables would predict persistence. Alpha levels for statistical significance were set at .05 where appropriate.

Study Sample

Participants for this study were recruited from the fall 2005 Freshman Foundations class at Grace College in Winona Lake, Indiana. The population used in this study was comprised of 217 first-year, first-time students who were enrolled at Grace College in the fall of 2005. All first-year, first-time students (who were 18 years or older) in the freshman foundations class were invited to participate in the study, and a sample of
191 students consented to do so. That sample of 191 students was randomly divided into three groups: a control group (N=64), intervention group 1 (N=64), and intervention group 2 (N=63). After the study began, two students requested that their names be removed from the study. The two students who withdrew from the study were both previously randomly assigned to intervention group 2.

The study then was completed with a sample of 189 students. As the study concluded and the data were analyzed, it was discovered that there were a number of participants who either did not complete the intervention to which they were assigned or who only partially completed the intervention. Intervention group 1 started with a sample of 64; there were 10 students who attended only one of the two required meetings with their faculty member, and there were 13 students who failed to attend either of the two meetings with their faculty advisor. Intervention group 2 started with a sample of 63, but 2 removed themselves from this group, which reduced the sample to 61. During the study there were 9 students who did not show up for either of their assigned meetings and 1 who partially completed the required meetings with a trained student development professional. In order to strengthen the internal validity of the study, those students who only partially completed their intervention group assignments as well as those who did not show up were removed from the study. As a result, the total used for analysis was a sample population of (N= 156). The control group had a sample of (N= 64), intervention group 1 had a sample of (N=41), and intervention group 2 had a sample of (N=51). This study produced a consented participation rate of 88%, and 81% of the population which consented completed the study.
Demographics

Initial analysis was based on a total sample of \( N = 189 \), which included the students who did not complete the study and the students who partially completed the study. For the purpose of internal validity, both groups have been used in order to determine that the conclusions drawn have not been substantially altered by elimination of those who partially engaged the process. This section presents information on the categorical and continuous demographic variables for this study, including frequencies, percentages, and means and standard deviations (where appropriate) for the following variables: age, race and ethnicity, gender, residence, permanent residence, MBTI and Grade Point Average (GPA). The age of the sample population ranged from 18 to 24 years of age and had a mean of 18.39. The average high school GPA of those who consented was 3.37 on a 4.00 scale. Table 4 records the descriptive statistics for age and GPA of the sample of \( N = 189 \).

Table 4

*Descriptive Statistics for Age and GPA*

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>189</td>
<td>18</td>
<td>24</td>
<td>18.39</td>
<td>.739</td>
</tr>
<tr>
<td>GPA</td>
<td>189</td>
<td>.00</td>
<td>4.00</td>
<td>3.37</td>
<td>.580</td>
</tr>
</tbody>
</table>

A frequency distribution is a tally or count of the number of times each score on a single variable occurs. In this study frequency variables were recorded for age, race, ethnicity, gender, residence (whether students lived on campus or off-campus), permanent residence (location of the populations permanent place of residence), and Myers-Briggs Type. Table 5 shows frequencies for age, race and ethnicity, and gender.
Table 5
Demographics of Study Participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>131</td>
<td>69.3</td>
</tr>
<tr>
<td>19</td>
<td>50</td>
<td>26.5</td>
</tr>
<tr>
<td>20</td>
<td>5</td>
<td>2.6</td>
</tr>
<tr>
<td>21</td>
<td>1</td>
<td>.5</td>
</tr>
<tr>
<td>22</td>
<td>1</td>
<td>.5</td>
</tr>
<tr>
<td>24</td>
<td>1</td>
<td>.5</td>
</tr>
<tr>
<td>Total</td>
<td>189</td>
<td>100</td>
</tr>
<tr>
<td>Race and Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>184</td>
<td>97.4</td>
</tr>
<tr>
<td>Hispanic</td>
<td>3</td>
<td>1.6</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>1.1</td>
</tr>
<tr>
<td>Total</td>
<td>189</td>
<td>100</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>63</td>
<td>33.3</td>
</tr>
<tr>
<td>Female</td>
<td>126</td>
<td>66.7</td>
</tr>
<tr>
<td>Total</td>
<td>178</td>
<td>100</td>
</tr>
</tbody>
</table>

The sample had a large number of Caucasian participants (N=184), followed by Hispanics (N=3), followed by a sample (N=2) labeled other which is representing any other ethnic groups represented in this study. Finally, the sample had more females (N=126) than males (N=63). Table 6 provides details on the frequencies for residence, permanent residence, and Myers-Briggs Personality Type.
### Table 6
**Demographics of Study Variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Residence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td>158</td>
<td>89.0</td>
</tr>
<tr>
<td>Commuter</td>
<td>19</td>
<td>10.7</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>178</td>
<td>100</td>
</tr>
<tr>
<td><strong>Permanent Residence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students living within two counties of institution</td>
<td>25</td>
<td>13.2</td>
</tr>
<tr>
<td>Other Indiana students</td>
<td>74</td>
<td>39.4</td>
</tr>
<tr>
<td>Ohio</td>
<td>34</td>
<td>18.1</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>14</td>
<td>7.4</td>
</tr>
<tr>
<td>Other</td>
<td>41</td>
<td>21.8</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>189</td>
<td>100</td>
</tr>
<tr>
<td><strong>MBTI</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISTJ</td>
<td>17</td>
<td>9.0</td>
</tr>
<tr>
<td>ISFJ</td>
<td>29</td>
<td>15.3</td>
</tr>
<tr>
<td>INFJ</td>
<td>8</td>
<td>4.2</td>
</tr>
<tr>
<td>INTJ</td>
<td>5</td>
<td>3.2</td>
</tr>
<tr>
<td>ISTP</td>
<td>9</td>
<td>4.8</td>
</tr>
<tr>
<td>ISFP</td>
<td>9</td>
<td>4.8</td>
</tr>
<tr>
<td>INFP</td>
<td>8</td>
<td>4.8</td>
</tr>
<tr>
<td>INTP</td>
<td>1</td>
<td>.5</td>
</tr>
<tr>
<td>ESTP</td>
<td>8</td>
<td>4.5</td>
</tr>
<tr>
<td>ESFP</td>
<td>20</td>
<td>12.4</td>
</tr>
<tr>
<td>ENFP</td>
<td>21</td>
<td>12.4</td>
</tr>
<tr>
<td>ENTP</td>
<td>8</td>
<td>4.3</td>
</tr>
<tr>
<td>ESTJ</td>
<td>9</td>
<td>4.9</td>
</tr>
<tr>
<td>ESFJ</td>
<td>22</td>
<td>12.4</td>
</tr>
<tr>
<td>ENFJ</td>
<td>3</td>
<td>1.6</td>
</tr>
<tr>
<td>Missing</td>
<td>4</td>
<td>2.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>189</td>
<td>100</td>
</tr>
</tbody>
</table>

Within this cohort were 168 residential students, and 20 who lived off-campus.

There were 25 students who held a permanent residence within two counties of the college, and 74 who lived outside the two counties, but within the state of Indiana. There
were 34 students from Ohio, 14 from Pennsylvania and 41 from other parts of the country. The Myers-Briggs Type Indicator had a broad representation of the 16 preferences. In order to better represent the data the MBTI was re-calculated into eight primary areas, the combinations of the eight preferences are described as two dichotomous preferences, which are perception and judgment and thinking and feeling. Table 7 represents the demographics of this study for the MBTI preferences of judging and perceiving and thinking and feeling.

Table 7

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBTI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SP</td>
<td>49</td>
<td>25.9</td>
</tr>
<tr>
<td>SJ</td>
<td>78</td>
<td>41.3</td>
</tr>
<tr>
<td>NJ</td>
<td>17</td>
<td>9.0</td>
</tr>
<tr>
<td>NP</td>
<td>41</td>
<td>21.7</td>
</tr>
<tr>
<td>Missing</td>
<td>4</td>
<td>2.1</td>
</tr>
<tr>
<td>Total</td>
<td>189</td>
<td>100</td>
</tr>
<tr>
<td>MBTI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ST</td>
<td>42</td>
<td>22.2</td>
</tr>
<tr>
<td>SF</td>
<td>82</td>
<td>43.4</td>
</tr>
<tr>
<td>NF</td>
<td>47</td>
<td>24.9</td>
</tr>
<tr>
<td>NT</td>
<td>14</td>
<td>7.4</td>
</tr>
<tr>
<td>Missing</td>
<td>4</td>
<td>2.2</td>
</tr>
<tr>
<td>Total</td>
<td>178</td>
<td>100</td>
</tr>
</tbody>
</table>

Frequencies on students who did and did not persist from Fall to Spring semester were taken. Eighteen students dropped out in the Fall semester or did not register for Spring classes. Of the 18 students who dropped out, 12 were from the control group, four were from intervention group 1 and two were from intervention group 2. A total of 42 students failed to register for classes for the fall semester of 2006. Of the 42 students who did not register for fall classes, twenty-five were from the control group, 11 were from intervention group 1, and 6 were from intervention group 2.
Finally, frequencies of students who did not complete the intervention groups were taken. There were 22 no shows from this sample and 11 students who started the study, but did not complete the intervention.

In order to be certain that there were no significant differences among groups and to be certain of the validity of the randomization process, a Chi-Square analysis was performed on all the variables in the study, comparing the scores of those who were partially involved, who completed all interventions, and who did not show up for their assigned intervention. Table 8 shows the Chi-square results for the partial variables and all other variables in the study.

<table>
<thead>
<tr>
<th>Table 8</th>
<th>Chi-Square Analysis of Partial Variables of Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable in Study</td>
<td>Removed Variable</td>
</tr>
<tr>
<td>Pearson Chi-square</td>
<td>0.00</td>
</tr>
<tr>
<td>Gender</td>
<td>11</td>
</tr>
<tr>
<td>Gender</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
</tr>
</tbody>
</table>

The Chi-square analysis failed to show significant difference between the male to female ratios between the two groups.

<table>
<thead>
<tr>
<th>Table 9</th>
<th>Chi-Square Analysis of Partial Variables of Residence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable in Study</td>
<td>Removed Variable</td>
</tr>
<tr>
<td>Pearson Chi-square</td>
<td>0.093</td>
</tr>
<tr>
<td>Residence</td>
<td>29</td>
</tr>
<tr>
<td>Residence</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
</tr>
</tbody>
</table>
The Chi-square analysis failed to show significance difference between the on-campus student and the off-campus student ratios between the two groups.

Table 10
*Chi-Square Analysis of the Partial Variable of Permanent Residence*

<table>
<thead>
<tr>
<th>Variable Removed</th>
<th>Variable in Study</th>
<th>Value</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-square</td>
<td></td>
<td>4.918</td>
<td>.296</td>
</tr>
<tr>
<td>Living within two Counties</td>
<td>7</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Indiana</td>
<td>15</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>Ohio</td>
<td>4</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>3</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Other States</td>
<td>4</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>155</td>
<td></td>
</tr>
</tbody>
</table>

The Chi-square analysis failed to show significance between the permanent residence of the student between the two groups.

Table 11
*Chi-Square Analysis of the Partial Variable for Indiana Residence*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Removed Variable</th>
<th>Variable in Study</th>
<th>Value</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-square</td>
<td></td>
<td></td>
<td>3.150</td>
<td>.076</td>
</tr>
<tr>
<td>Indiana Residence</td>
<td>22</td>
<td>77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indiana Residence</td>
<td>11</td>
<td>78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>155</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Chi-square analysis demonstrated that the ratios between groups for Indiana residence for both the fall to spring semester and the spring to intent to register demonstrate significance.
Table 12

*Chi-Square Analysis of Partial Variables of MBTITF*

<table>
<thead>
<tr>
<th>Variable Removed</th>
<th>Variable in Study</th>
<th>Value</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-square</td>
<td></td>
<td>8.449</td>
<td>.038</td>
</tr>
<tr>
<td>ST</td>
<td>3</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>SF</td>
<td>13</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>NF</td>
<td>12</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>NT</td>
<td>5</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>152</td>
<td></td>
</tr>
</tbody>
</table>

The Chi-square analysis demonstrates that the breakdown into personality types of T& F’s between the two groups is statistically significant. What this means is that personality may have played a part in why students chose to only partially complete or to not show up for their assigned intervention. Another Chi-square was performed to explore the ratio of P’s to non-P’s and the ratio of F’s to non-F’s for each group. The analysis demonstrated that there is no difference between the two groups and the different personality preferences.

Table 13

*Chi-Square Analysis of Partial Variables of F’s and Non-F’s*

<table>
<thead>
<tr>
<th>Variable Removed</th>
<th>Variable in Study</th>
<th>Value</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-square</td>
<td></td>
<td>0.310</td>
<td>.577</td>
</tr>
<tr>
<td>Not a Feeler</td>
<td>9</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>Is a Feeler</td>
<td>24</td>
<td>103</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>152</td>
<td></td>
</tr>
</tbody>
</table>
Chi-square analysis was also completed on the two intervention groups in order to test for bias. Both of the Chi-square analyses demonstrated that those removed from the study when compared with those who remained in the study showed no statistical significance.

Table 15
Chi-Square Analysis of Partial Variables for Fall to Spring Semester

<table>
<thead>
<tr>
<th>Variable</th>
<th>Removed Variable</th>
<th>Variable in Study</th>
<th>Value</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-square</td>
<td></td>
<td></td>
<td>3.478</td>
<td>.062</td>
</tr>
<tr>
<td>Intervention Group 1</td>
<td>6</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intervention Group 2</td>
<td>27</td>
<td>144</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>156</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 16
Chi-Square Analysis of Partial Variables Spring to Intent to Return

<table>
<thead>
<tr>
<th>Variable</th>
<th>Removed Variable</th>
<th>Variable in Study</th>
<th>Value</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-square</td>
<td></td>
<td></td>
<td>2.856</td>
<td>.091</td>
</tr>
<tr>
<td>Intervention Group 1</td>
<td>11</td>
<td>31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intervention Group 2</td>
<td>22</td>
<td>125</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>156</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Because these ratios demonstrated that there was no bias as to why students only partially completed their intervention or why they did not show up for their intervention, no further analysis was done using the 33 students who were removed from the study.

Final Data Set

This section presents information on the categorical and continuous demographic variables using the final study sample (N=156), including, frequencies, percentages, and means and standard deviations (where appropriate) for the following variables: age, race and ethnicity, gender, residence, permanent residence, MBTI and Grade Point Average (GPA). Table 17 records the descriptive statistics for age and GPA of the sample population in this study.

Table 17
Descriptive Statistics for Age and GPA of Sample Population in Study

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>156</td>
<td>18</td>
<td>24</td>
<td>18.41</td>
<td>.786</td>
</tr>
<tr>
<td>GPA</td>
<td>156</td>
<td>.00</td>
<td>4.00</td>
<td>3.38</td>
<td>.580</td>
</tr>
</tbody>
</table>

Frequencies and percentages were calculated for age, race, ethnicity, gender, residence (whether students lived on campus or off-campus), permanent residence (location of the populations permanent place of residence), and Myers-Briggs Type. Table 18 shows frequencies for age, race and ethnicity, and gender.
Participants ranged in age from 18 to 24 years of age. The average age in the group is 18.4 years of age. Clearly the largest percentage (68.6%) of the sample was 18 years old. The sample had a large number of Caucasian participants (N=152), followed by Hispanics (N=2), followed by a sample (N=2) labeled other which is representing any other ethnic groups represented in this study. Finally, the sample had more females (N=104) than males (N=52). Table 19 provides details on the frequencies for residence, permanent residence and Myers-Briggs Personality Type.

### Table 18
**Demographics of Study Participants**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>108</td>
<td>68.6</td>
</tr>
<tr>
<td>19</td>
<td>41</td>
<td>26.3</td>
</tr>
<tr>
<td>20</td>
<td>5</td>
<td>2.8</td>
</tr>
<tr>
<td>21</td>
<td>1</td>
<td>.6</td>
</tr>
<tr>
<td>22</td>
<td>1</td>
<td>.6</td>
</tr>
<tr>
<td>24</td>
<td>1</td>
<td>.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>156</td>
<td>100</td>
</tr>
<tr>
<td><strong>Race and Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>152</td>
<td>97.4</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2</td>
<td>1.3</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>156</td>
<td>100</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>52</td>
<td>33.3</td>
</tr>
<tr>
<td>Female</td>
<td>104</td>
<td>66.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>156</td>
<td>100</td>
</tr>
<tr>
<td>Variable</td>
<td></td>
<td>Percent</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----</td>
<td>---------</td>
</tr>
<tr>
<td><strong>Residence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td>139</td>
<td>89.1</td>
</tr>
<tr>
<td>Commuter</td>
<td>16</td>
<td>10.3</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>.6</td>
</tr>
<tr>
<td>Total</td>
<td>156</td>
<td>100</td>
</tr>
<tr>
<td><strong>Permanent Residence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students living within two counties of institution</td>
<td>18</td>
<td>11.3</td>
</tr>
<tr>
<td>Other Indiana students</td>
<td>59</td>
<td>37.8</td>
</tr>
<tr>
<td>Ohio</td>
<td>30</td>
<td>19.2</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>11</td>
<td>7.1</td>
</tr>
<tr>
<td>Other</td>
<td>37</td>
<td>23.7</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>.6</td>
</tr>
<tr>
<td>Total</td>
<td>156</td>
<td>100</td>
</tr>
<tr>
<td><strong>MBTI</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISTJ</td>
<td>15</td>
<td>9.6</td>
</tr>
<tr>
<td>ISFJ</td>
<td>26</td>
<td>16.7</td>
</tr>
<tr>
<td>INFJ</td>
<td>7</td>
<td>4.5</td>
</tr>
<tr>
<td>INTJ</td>
<td>4</td>
<td>2.6</td>
</tr>
<tr>
<td>ISTP</td>
<td>9</td>
<td>5.8</td>
</tr>
<tr>
<td>ISFP</td>
<td>5</td>
<td>3.2</td>
</tr>
<tr>
<td>INFP</td>
<td>6</td>
<td>3.8</td>
</tr>
<tr>
<td>INTP</td>
<td>1</td>
<td>.6</td>
</tr>
<tr>
<td>ESTP</td>
<td>7</td>
<td>4.5</td>
</tr>
<tr>
<td>ESFP</td>
<td>20</td>
<td>12.8</td>
</tr>
<tr>
<td>ENFP</td>
<td>17</td>
<td>10.9</td>
</tr>
<tr>
<td>ENTP</td>
<td>5</td>
<td>3.2</td>
</tr>
<tr>
<td>ESTJ</td>
<td>8</td>
<td>5.1</td>
</tr>
<tr>
<td>ESFJ</td>
<td>20</td>
<td>12.8</td>
</tr>
<tr>
<td>ENFJ</td>
<td>2</td>
<td>1.3</td>
</tr>
<tr>
<td>Missing</td>
<td>4</td>
<td>2.6</td>
</tr>
<tr>
<td>Total</td>
<td>156</td>
<td>100</td>
</tr>
</tbody>
</table>

Within this cohort were 139 residential students, and 16 who lived off-campus.

There were 18 students who held a permanent residence within two counties of the college, and 59 who lived outside the two counties, but within the state of Indiana. There
were 30 students from Ohio, 11 from Pennsylvania and 37 from other parts of the country.

The Myers-Briggs Type Indicator had a broad representation of the 16 preferences. In order to better represent the data the MBTI was re-calculated into eight primary areas, the combinations of the eight preferences are described as two dichotomous preferences, which are perception and judgment and thinking and feeling. Table 20 represents the frequencies of this sample for the MBTI preferences of judging and perceiving and thinking and feeling.

Table 20
Demographics of Study Variables J, P and T, F

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBTI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SP</td>
<td>41</td>
<td>26.3</td>
</tr>
<tr>
<td>SJ</td>
<td>69</td>
<td>44.2</td>
</tr>
<tr>
<td>NJ</td>
<td>13</td>
<td>8.3</td>
</tr>
<tr>
<td>NP</td>
<td>29</td>
<td>18.6</td>
</tr>
<tr>
<td>Missing</td>
<td>4</td>
<td>2.6</td>
</tr>
<tr>
<td>Total</td>
<td>156</td>
<td>100</td>
</tr>
<tr>
<td>MBTI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ST</td>
<td>39</td>
<td>25.0</td>
</tr>
<tr>
<td>SF</td>
<td>69</td>
<td>44.2</td>
</tr>
<tr>
<td>NF</td>
<td>35</td>
<td>22.4</td>
</tr>
<tr>
<td>NT</td>
<td>9</td>
<td>5.8</td>
</tr>
<tr>
<td>Missing</td>
<td>4</td>
<td>2.6</td>
</tr>
<tr>
<td>Total</td>
<td>156</td>
<td>100</td>
</tr>
</tbody>
</table>

Finally, frequencies for students who did and did not persist from Fall to Spring semester were taken. Twelve students dropped out in the Fall semester or did not register for Spring classes. Of the twelve students who dropped out, eight were from the control group, three were from intervention group 1 and one was from intervention group 2. A total of thirty-one students failed to register for classes for the fall semester of 2006. Of
those, seventeen were from the control group, nine were from intervention group 1 and five were from intervention group 2.

Research Questions

This section presents the results of the tests to answer each of the research questions guiding this study.

Research Question 1

To what extent do student background characteristics (e.g., high school grades, gender, age or ethnicity) influence retention from the first to second semester and first to second year?

Logistic regression was used to assess the effect of background characteristics on retention, because it is well suited for the study of dichotomous outcome variables. Logistic regression estimates how various factors will influence the probability that a particular outcome will occur. Logistic regression was selected to assess whether the four predictor variables, gender, age, G.P.A, and ethnicity significantly predicted whether or not a student would return to college after the fall semester. When all four predictor variables are considered together, they do not significantly predict whether a student will return or dropout after the first semester at Grace college $X^2 = 2.27, df = 4, N = 156, p > .05$. $R^2$ gives a rough estimate of the variance that can be predicted from the combination of these variables. Table 21 contains the details of the analysis.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient (B)</th>
<th>se</th>
<th>Odds ratio (t-ratio)</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>.007</td>
<td>.661</td>
<td>1.007</td>
<td>1</td>
<td>.991</td>
</tr>
<tr>
<td>Age</td>
<td>-.247</td>
<td>.300</td>
<td>.781</td>
<td>1</td>
<td>.411</td>
</tr>
<tr>
<td>HSGPA</td>
<td>-.022</td>
<td>.559</td>
<td>.978</td>
<td>1</td>
<td>.969</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>-.665</td>
<td>.444</td>
<td>.514</td>
<td>1</td>
<td>.134</td>
</tr>
</tbody>
</table>
Of the 12 students who did not persist into the second semester, no individual independent variable elicited significance in predicting who would return for the spring semester of classes. When analyzing the same background characteristics to predict who will register for classes and persist into the second year of college, all of the four-predictor variables failed to predict whether or not a student would register for classes and return for their second year of college. When all four variables are considered together, they fail to significantly predict whether or not a student will return for their second year of college $X^2 = 2.205, df = 4, N = 156, p = .05$. Table 22 represents the logistic regression information.

Table 22

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient (B)</th>
<th>se</th>
<th>Odds ratio (t-ratio)</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>-.015</td>
<td>.437</td>
<td>.985</td>
<td>1</td>
<td>.972</td>
</tr>
<tr>
<td>Age</td>
<td>.001</td>
<td>.263</td>
<td>1.001</td>
<td>1</td>
<td>.998</td>
</tr>
<tr>
<td>HSGPA</td>
<td>.459</td>
<td>.330</td>
<td>1.583</td>
<td>1</td>
<td>.164</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>-.241</td>
<td>.436</td>
<td>.786</td>
<td>1</td>
<td>.580</td>
</tr>
</tbody>
</table>

For the purposes of this study the various locations where a student resides needed to be categorized into residential (whether a student lives on or off campus) and permanent residence (the distance a student's permanent residence is from campus). Historically those who live on-campus are more likely to persist than those who commute. A Chi-square analysis was used to assess whether living on campus was related to persistence of freshman students.
Table 23  
*Chi-Square Analysis for Residential and Commuter Student Persistence from Fall to Spring Semester*

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>persist</th>
<th>did not persist</th>
<th>x²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-square</td>
<td></td>
<td></td>
<td></td>
<td>.566</td>
<td>.452</td>
</tr>
<tr>
<td>Residential</td>
<td>143</td>
<td>129</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commuter Student</td>
<td>12</td>
<td>10</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>155</td>
<td>139</td>
<td>12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Living on campus did not prove to be a predictor of persistence (p=.452) for the fall to spring semester. A Chi-square analysis was used to determine if residential living was related to whether students would register for classes during their second semester and persist into their second year.

Table 24  
*Chi-Square Analysis for Indiana Residential and Commuter Student Persistence from Spring to Fall Intent to Return*

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>persist</th>
<th>did not persist</th>
<th>x²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-square</td>
<td></td>
<td></td>
<td></td>
<td>.279</td>
<td>.598</td>
</tr>
<tr>
<td>Residential</td>
<td>139</td>
<td>112</td>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commuter Student</td>
<td>16</td>
<td>12</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>155</td>
<td>124</td>
<td>31</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Living on campus did not prove to be related to persistence (p=.598) for the spring semester registration period which would lead to students returning for their second year of college.

Similarly, students whose permanent residence is further away from their campus home might be thought to persist better than students who have a permanent residence within the state of Indiana. Chi-square analysis was used to assess the assumption that Indiana students persist better than those students who live outside the state of Indiana.
Table 25
**Chi-Square Analysis for Indiana Residential Students and Persistence from Fall to Spring Semester**

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>persist</th>
<th>did not persist</th>
<th>x2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-square</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indiana Resident</td>
<td>77</td>
<td>71</td>
<td>6</td>
<td>.001</td>
<td>.981</td>
</tr>
<tr>
<td>Other</td>
<td>78</td>
<td>72</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>155</td>
<td>143</td>
<td>12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Indiana permanent residence (p=.981) was not related to whether or not a student would register for classes and return for their second semester of classes. When considering to what extent those who are residents of the state of Indiana would likely persist into their second year of college, a Chi-square analysis was used assess the fall to spring registration data.

Table 26
**Chi-Square Analysis for Indiana Residential Students and Persistence from Spring to Fall Intent to Return**

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>persist</th>
<th>did not persist</th>
<th>x2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-square</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indiana Resident</td>
<td>77</td>
<td>64</td>
<td>13</td>
<td>.929</td>
<td>.335</td>
</tr>
<tr>
<td>Other</td>
<td>78</td>
<td>60</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>155</td>
<td>124</td>
<td>31</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Residency again was not related (p=.335) to whether or not a student would register for classes and likely persist into their sophomore year of college.

Research Question 2

To what extent is there a pattern to the Myers Briggs Type Indicator personality types of the first-year freshmen who drop out of school after or during their first full year?

Chi-square analysis was used to assess the relationship that the Myers Briggs Type Indicator (MBTI) had with persistence of first-year students. Because of the size of
the sample (n= 156, 4 missing cases), the 16 MBTI preferences were re-coded into two combinations of four preferences. The two combinations analyzed are thinking and feeling and perception and judgment. A Chi-square was used to determine if there is a greater than chance relationship between these two combinations and persistence at Grace College.

The predictor variable of MBTITF (Myers Briggs Type Indicator, combination of thinking and feeling) was analyzed and did not have a significant relationship (p=.282) with whether a student returned or dropped out after the first semester at Grace College.

Table 27 represents the findings for the fall to spring semester.

Table 27

Chi-Square Analysis for the Myers-Briggs Type Indicator Predictor Variable T and F and Persistence from Fall to Spring Semester

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>persist</th>
<th>did not persist</th>
<th>x2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-square</td>
<td></td>
<td></td>
<td></td>
<td>3.813</td>
<td>.282</td>
</tr>
<tr>
<td>ST</td>
<td>39</td>
<td>36</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SF</td>
<td>69</td>
<td>62</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NF</td>
<td>35</td>
<td>35</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NT</td>
<td>9</td>
<td>8</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Missing Variables</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>156</td>
<td>141</td>
<td>11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When analyzing the same MBTI characteristics with who would register for classes and persist into the second year of college, the combination of the MBTITF did not have a significant relationship (p=.993) with whether a student would return or drop out prior to the start of their sophomore year in college. Table 28 represents the results of the Chi-square analysis.
Table 28
Chi-Square Analysis for the Myers-Briggs Type Indicator Predictor Variable T and F and Persistence from Spring to Fall Intent to Return

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>persist</th>
<th>did not persist</th>
<th>x2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-square</td>
<td></td>
<td></td>
<td></td>
<td>.086</td>
<td>.993</td>
</tr>
<tr>
<td>ST</td>
<td>39</td>
<td>31</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SF</td>
<td>69</td>
<td>56</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NF</td>
<td>35</td>
<td>28</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NT</td>
<td>9</td>
<td>7</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Missing Variables</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>156</td>
<td>122</td>
<td>30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As seen in tables 27 and 28, the MBTITF appears to be unrelated to the persistence and dropout of students with this cohort.

To assess whether a greater than chance relationship exists between the combinations of the (SP) variable, a Chi-square was used to assess the effect that this variable of the Myers Briggs Type Indicator (MBTI) had on persistence of first-year, first-time students. The variable of MBTISP (Myers Briggs Type Indicator, combination of Sensing and Perceiving) was analyzed and it was discovered that it appears to be unrelated (p=.475) to whether a student is likely to return for his or her second semester of college. Table 29 represents the results of the Chi-square analysis.

Table 29
Chi-Square Analysis for the Myers-Briggs Type Indicator Predictor Variable S and P and Persistence from Fall to Spring Semester

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>persist</th>
<th>did not persist</th>
<th>x2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-square</td>
<td></td>
<td></td>
<td></td>
<td>2.504</td>
<td>.475</td>
</tr>
<tr>
<td>SP</td>
<td>41</td>
<td>38</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SJ</td>
<td>69</td>
<td>62</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NJ</td>
<td>13</td>
<td>13</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NP</td>
<td>29</td>
<td>28</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Missing Variables</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>156</td>
<td>141</td>
<td>11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
When analyzing the same MBTI characteristics to predict who would register for classes and persist into the second year of college, the combinations of the variable of MBTISP did not prove to be related (p=.290) to whether a student will return or dropout prior to the start of their sophomore year in college. Table 30 represents the results of the Chi-square analysis.

Table 30
Chi-Square Analysis for the Myers-Briggs Type Indicator Predictor Variable S and P and Persistence from Spring to Fall Intent to Return

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>persist</th>
<th>did not persist</th>
<th>x²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP</td>
<td>41</td>
<td>34</td>
<td>7</td>
<td>3.746</td>
<td>.290</td>
</tr>
<tr>
<td>SJ</td>
<td>69</td>
<td>56</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NJ</td>
<td>13</td>
<td>12</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NP</td>
<td>29</td>
<td>20</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Missing Variables</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>156</td>
<td>122</td>
<td>30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As seen in tables 27 through 30 the MBTI did not prove to be related to persistence and dropout of students with this cohort. Because of the results of the Chi-square analysis, no further analysis was needed. There were four students who did not take the MBTI and are missing variables in this study.

Research Questions 3 and 4

Research Question 3 asked to what extent does extra time spent with a faculty member or advisor help retain first-year, first-time students into their second semester and or into their second year of college as opposed to those who did not receive extra time with a faculty member or advisor? And research Question 4 asked the same of the use of the Clifton StrengthsFinder™ inventory. The two questions were analyzed.
together in order to compare the two intervention groups with the control group of the study.

Chi-square tells whether or not a relationship is significant (not due to chance) between dichotomous or categorical variables. Phi and Cramer’s V provide a test of statistical significance as well as information about the strength of the association among the variables.

To investigate whether there is a greater than expected relationship between the study intervention groups and persistence from the Fall to Spring semester, a Chi-Square statistic was used. Table 31 shows the results and indicates that the relationships did not reach significance ($X^2 = 4.451, df2, N=156, p>.05$) at the .05 alpha level.

Table 31

### Chi-Square Analysis for Study Group Variables and Persistence from Fall to Spring Semester

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>persist</th>
<th>did not persist</th>
<th>$x^2$</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-square</td>
<td></td>
<td></td>
<td></td>
<td>4.451</td>
<td>.108</td>
</tr>
<tr>
<td>Control Group</td>
<td>64</td>
<td>56</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty Advisor</td>
<td>41</td>
<td>38</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>StrengthsFinder</td>
<td>51</td>
<td>50</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>156</td>
<td>144</td>
<td>12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A binary logistic regression was used to determine whether participation in the study intervention groups predicts student persistence from the fall to spring semester. The Omnibus Tests of Model Coefficients table indicates that, when both study group variables are tested in a logistic regression, the model is not significant ($X^2 = 5.076, df2, N=156, p>0.05$). Table 32 demonstrates that extra time spent with a faculty member did not predict persistence when compared against intervention group 2 and the control group. Time spent with the Clifton StrengthsFinder™ inventory and a trained student
development advisor approached significance (p=.068) in predicting who returned for the spring semester.

Table 32

Regression Analysis for Study Group Variables from Fall to Spring Semester

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient (B)</th>
<th>se</th>
<th>Odds ratio (t-ratio)</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>.593</td>
<td>.709</td>
<td>1.810</td>
<td>1</td>
<td>.403</td>
</tr>
<tr>
<td>Group 2</td>
<td>1.966</td>
<td>1.078</td>
<td>7.143</td>
<td>1</td>
<td>.068</td>
</tr>
</tbody>
</table>

To investigate whether there is a relationship between the intervention groups and students registering for their second year of college, a Chi-square statistic was again used. Table 33 shows the results, which indicate that the relationships did not reach significance. The Chi-square failed to indicate if there is a greater than expected relationship present ($X^2 = 5.157$, $df=2$, $N=156$, $p>.05$). In this case the $p$ is .076 for Cramer's V, which is approaching significance, and the effect size (Cramer's V = .182), which is smaller than a typical effect size.

Table 33

Chi-Square Analysis for Study Group Variables Persistence from Spring to Fall Intent to Return

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>persist</th>
<th>did not persist</th>
<th>x2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-square</td>
<td>156</td>
<td>125</td>
<td>31</td>
<td>5.157</td>
<td>.076</td>
</tr>
<tr>
<td>Control Group</td>
<td>64</td>
<td>47</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty Advisor</td>
<td>41</td>
<td>32</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>StrengthsFinder</td>
<td>51</td>
<td>46</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>156</td>
<td>125</td>
<td>31</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A binary logistic regression was used to determine if being in a particular study intervention group predicts persistence. Table 34 demonstrates that extra time spent with a faculty member did not show significance (p=.594) when trying to predict whether or not a first-year, first-time student will register for classes and then return for their second year of college. The Clifton StrengthsFinder™ (group 2) showed statistical significance.
(p=.029) in predicting whether or not a freshman student will register for classes and then return for their second semester. \( R^2 \) indicates that the study group variable accounted for approximately 6% of the variance in spring to fall intent to return.

Table 34
Regression Analysis for Study Group Variables from Spring to Fall Intent to Return

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient (B)</th>
<th>se</th>
<th>Odds ratio (t-ratio)</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>.252</td>
<td>.472</td>
<td>1.286</td>
<td>1</td>
<td>.594</td>
</tr>
<tr>
<td>Group 2</td>
<td>1.202</td>
<td>.549</td>
<td>3.328</td>
<td>1</td>
<td>.029</td>
</tr>
</tbody>
</table>

**Research Questions 5 and 6**

Question 5 asked whether there is a relationship among background characteristics, *Clifton StrengthsFinder™* participation and retention. And research Question 6 asked the same of extra time spent with a faculty member. The two questions were analyzed together in order to compare the two intervention groups and the background characteristics.

Logistic regression was selected to assess whether three demographic variables, gender, age, and G.P.A., and both intervention groups might together significantly predict whether or not a student would return for spring semester. Table 35 demonstrates how background characteristics and the two intervention groups influenced persistence from the fall to spring semester.
Table 35
Regression Analysis of Intervention Groups and Background Characteristics for the Fall to Spring Semester

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient (B)</th>
<th>se</th>
<th>Odds ratio (t-ratio)</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-.276</td>
<td>.335</td>
<td>.759</td>
<td>1</td>
<td>.410</td>
</tr>
<tr>
<td>Gender</td>
<td>-.189</td>
<td>.682</td>
<td>.828</td>
<td>1</td>
<td>.782</td>
</tr>
<tr>
<td>HSGPA</td>
<td>-.133</td>
<td>.559</td>
<td>.876</td>
<td>1</td>
<td>.812</td>
</tr>
<tr>
<td>Intervention 1</td>
<td>.565</td>
<td>.715</td>
<td>1.759</td>
<td>1</td>
<td>.430</td>
</tr>
<tr>
<td>Intervention 2</td>
<td>2.035</td>
<td>1.093</td>
<td>7.653</td>
<td>1</td>
<td>.063</td>
</tr>
</tbody>
</table>

The regression analysis failed when considering background characteristics and the intervention groups to predict who would return for the spring semester.

Intervention group 2 did approach significance with a .063 p value. Race/Ethnicity was left out of the regression analysis because the sample is 97% White and only 3% minority.

Logistic regression was selected to assess whether three demographic variables, gender, age, and G.P.A., and both intervention groups might significantly predict whether or not a student would register and then return for their second year of college. Table 36 indicates how background characteristics and the Intervention groups impacted persistence for the registering of classes for the subsequent fall semester.

Table 36
Regression Analysis of Intervention Groups and Background Characteristics for Spring to Fall Intent to Return

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient (B)</th>
<th>se</th>
<th>Odds ratio (t-ratio)</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.004</td>
<td>.279</td>
<td>1.004</td>
<td>1</td>
<td>.989</td>
</tr>
<tr>
<td>Gender</td>
<td>-.129</td>
<td>.449</td>
<td>.879</td>
<td>1</td>
<td>.775</td>
</tr>
<tr>
<td>HSGPA</td>
<td>.383</td>
<td>.330</td>
<td>1.467</td>
<td>1</td>
<td>.246</td>
</tr>
<tr>
<td>Intervention 1</td>
<td>.260</td>
<td>.479</td>
<td>1.297</td>
<td>1</td>
<td>.587</td>
</tr>
<tr>
<td>Intervention 2</td>
<td>1.160</td>
<td>.556</td>
<td>1.297</td>
<td>1</td>
<td>.037</td>
</tr>
</tbody>
</table>
Only intervention group 2 was statistically significant (p=.037) when modeled with background characteristics. $R^2$ indicates that the model accounts for approximately 7% of the variance in whether or not students register to return for their second year of college.

Summary

The focus of this research study was to compare different approaches to academic advising and the use of student characteristics in influencing and predicting student persistence. This experimental design analyzed the relationships between personality and other personal characteristics and persistence, and between extra attention from first year advisors and persistence.

Examination of the data provided insights into the value of spending time with first-year students. In this study it was found that only spending time with students outside of the classroom for the purpose of connection and relationship building has no significant value in influencing who intends to return for classes after their first-year of college. However, spending time with students in advising using the Clifton StrengthsFinder™ inventory has significant value in influencing student persistence from the first to second year. When predicting who would register for classes and return for their sophomore year, no other variable approached significance. And when modeling the combination of intervention groups and background characteristics, it was found that intervention group 2 approached significance in influencing who would return for their second semester and significantly influenced who would register for a subsequent second year of college.
In the final chapter, the author will discuss the findings of the study, including a summary and overview of the research, conclusions to be drawn from the research results, and recommendations for future study related to first-time college students and academic advising.
CHAPTER V
DISCUSSION

This study was designed to compare different approaches to predicting and influencing student persistence at a faith-based liberal arts college. Three primary approaches to advising were implemented in an experimental design: prescriptive, developmental and strengths-based advising. It also incorporated the use of the Myers-Briggs Type Indicator, and student demographic characteristics, since these have shown mixed results in prior research. Considering the unique challenges of adaptation and persistence that students face at private institutions, this study sought to determine if personality influences students to persist, if regular meetings with institutional faculty advisors retain students, or if persistence is increased when students met with student development staff to learn key themes regarding their strengths using the Clifton StrengthsFinder™ inventory.

Research on new college students has traditionally been connected to pre-college high school grades, class rank, and standardized college-entrance exams (ACT and SAT). This researcher discovered that little research has examined the impact of focusing on the strengths and talents of freshman in attempting to increase persistence. The identification of strengths and talents in first year students could assist colleges and universities to more fully develop, assess, and evaluate the types of programs and services that individual students need.
It was hypothesized that either personality, extra time spent with faculty or assisting students to discover their strengths, through the use of the *Clifton StrengthsFinder™* inventory would contribute to stronger persistence rates of first-year, first-time students.

Chapter two examined the scope of related research available on student retention, use of the Myers-Briggs Type Indicator, the *Clifton StrengthsFinder™* inventory and current research in the field of advising, first year programs, and faculty-to-student interaction. From the literature review, it was determined that an experimental design which analyzed the relationships between personality and persistence and between extra attention from first year advisors and persistence was a feasible and worthwhile study that would add to the body of current research on first-year college students. The study introduced two intervention groups, which included first-year, first-time students spending extra time with faculty or meeting with trained student development professionals to interpret their strengths through the *Clifton StrengthsFinder™* inventory.

Chapter three detailed the research methodologies and the process of the research study, including the research design, study site and population the data collection and analysis processes and the instrumentation used in the study. Chapter three was written with the hope that the study will be duplicated in the future.

Chapter four presented the results and findings of the study along with descriptions of the statistical tests used to measure for statistical significance the questions asked in the study. It was found that spending time with students outside of the classroom in a non-structured way has little value, but spending time with students in the
interpreting of the Clifton StrengthsFinder™ inventory has significant value in influencing student persistence from the first to second year.

Review of Results

One of the goals of this study was to identify variables related to retention so that institutions, like the one in this study, could purposefully implement programs that would impact the retention rate of first-year, first-time students. In order for first-year, first-time students to successfully integrate into higher education institutions, appropriate interventions are needed to address students’ diverse differences and needs.

Research Question 1

Research question one was examined by conducting logistic regression analysis on student background characteristics and persistence. This investigation included gender, age, HSGPA and ethnicity. The results revealed no significant differences in the characteristics of who would return for the spring semester and who would register for classes to return the subsequent fall semester. Many recent studies have found that high school rank, SAT and ACT scores are consistent predictors of GPA and persistence in college (Okun & Finch, 1998; Moore, 2006). Pascarelli and Terenzini (2005) state, “grades may well be the best single predictor of student persistence” (p. 396). These studies underscore the importance of students getting off to a good start in college. In this study, GPA did not approach significance in determining who would return for their spring semester or who would register for classes and return their second year of college. At Grace College, there has been a renewed effort toward recruiting students who fit the mission of the institution as well as students who are strong academically.
In this study, Race/Ethnicity was not expected to be a primary indicator of persistence. The first-year, first-time student sample in this study is 97% White. This leaves only 3% minority within the sample, and such a low percentage would not be an appropriate sample size for analysis.

Further investigation included the various locations of where a student resides in regard to their permanent residence. Historically students who live on-campus are more likely to persist than those who commute to campus (Peltier et al., 1999; Pascarella & Terenzini, 1991, 2005). There is substantial evidence that students who live on-campus are more likely to persist in college (Upcraft & Gardner, 1989; Upcraft et al., 2005).

In a similar way, it was this researcher's opinion from past experience with students at Grace College that students whose permanent residence is further away from their campus residence might persist better than those students who maintain a permanent Indiana residency. The reason for this would be that students who grew up close to where they go to college, might be more likely to go home more often in their first year and potentially affect their ability to connect to their college community even if they choose to live on-campus. Students who leave campus on weekends may not connect to the social aspects of campus life. However, in this study, residency failed to predict whether or not a student would register for classes for the spring semester and residency failed to predict whether or not a student would register for classes and likely persist into their sophomore year of college.

Because the sample of freshman students who live off-campus is small, it is possible that reaching significance would not be likely for this cohort. There were 18 Indiana students who did not register for classes leading into the spring semester of 2006.
This is almost half of the 39 total who did not register for the fall of 2006. It seems that one year's worth of data is not sufficient to assess whether or not living in a community in the state of Indiana and thus living closer to campus has any impact on persistence of first-year students. It is the recommendation of this researcher that further investigation occur related to residence and the closeness of campus. This research should look back at past freshman cohorts and review this data over several years.

*Research Question 2*

Research question two was examined using Chi-square analysis to assess the relationship the Myers-Briggs Type Indicator (MBTI) had with persistence of first-year, first-time students. In order to better analyze the data, the 16 MBTI preferences were re-coded into two combinations of four preferences. The combinations are perception and judgment (MBTISP), and thinking and feeling (MBTITF).

There have been numerous studies that have connected MBTI type to persistence (Provost & Anchors, 2003; Provost 1985; Schurr & Ruble, 1986). There has also been a recent study in which MBTI type did not produce significance when trying to predict student success and retention in an introductory recording studio techniques course in a community college (Van Regenmorter, 2004). It was surprising to this researcher when analyzing the MBTI characteristics and persistence, the combinations of the predictor variables of MBTITF and MBTISP appears to be unrelated to whether or not a student would return for their second semester or their sophomore year of college.

There are a few practical reasons why this may have occurred. The first is that many of the studies that have been done in the past using the MBTI, have used larger samples of students. The sample in this study was small and may have affected the
possible outcomes that could be seen with larger cohorts. Secondly, many studies regarding the MBTI are geared to a specific class, such as an engineering class or nursing class. In addition many studies are often connected to success in a certain field of study. Many students who enter highly technological fields of study might be more likely to lean on their personality type in order to be successful. Thirdly, this researcher found very little critical research using the MBTI; moreover, many researchers who have found significance with the MBTI and persistence have been published by the organization that distributes the MBTI. Finally, a study that just focuses on first-year, first-time students may not allow enough time for students to discover their focus of study and career path.

Research Questions 3 and 4

Research questions three and four analyzed whether extra time spent with a faculty advisor (intervention group 1) or extra time spent with a trained student development professional and the use of the *Clifton StrengthsFinder™* inventory (intervention group 2) would retain first-year students into their second semester and or into their second year of college. These questions were analyzed together in order to compare the two intervention groups with the control group. Neither of the Chi-square analyses indicated that extra time spent with a faculty advisor (intervention group 1) and the use of the *Clifton StrengthsFinder™* inventory (intervention group 2) were related to dropout of college before the second semester and before the second year of college. Logistic regressions were used in order to unpack and analyze the data. The results of the logistic regression analysis demonstrated that extra time spent with a faculty advisor (intervention group 1) did not demonstrate statistical significance in attempting to predict first-year persistence rates for the fall to spring semester or for the spring to fall intent to
return leading into the student’s sophomore year. However, the logistic regression analysis, when investigating whether or not the use of the *Clifton StrengthsFinder™* inventory and extra time spent with a trained student development advisor (intervention group 2) was a significant predictor of first-year, first-time student persistence in predicting who intended to return for their second year of college.

The implications of this outcome should change the advising process at this faith-based liberal arts institution. A finding such as this should encourage an institution to consider a comprehensive, developmental and strengths-based approach to advising. Such a change may involve full-time professional advisors. The *Clifton StrengthsFinder™* inventory could be used as a tool to improve student success, and help freshman students discover their strengths and begin to think about career and major selection early in their first-year of college. The advantages of using the *Clifton StrengthsFinder™* inventory is that when the tool is used in a developmental advising situation the advisor and student build a relationship that allows for interaction and follow-up on the student’s strengths. This could be a great advantage to small faith-based liberal arts institutions.

Another implication of this finding could be in classroom design and instruction. If faculty were to understand the impact that the *Clifton StrengthsFinder™* inventory has on student adjustments, faculty could implement assignments and learning activities, which are based upon strengths development to further increase student self-awareness and success. Hopefully, findings such as these would begin a comprehensive discussion with faculty and senior administration to review curriculum design and program design.
that would utilize the strengths approach. This institution is currently considering a re-
structuring that would permit wide dialogue of these results among the college faculty.

While the use of the *Clifton StrengthsFinder*™ inventory is relatively new in
higher education, this study, like other studies using the *Clifton StrengthsFinder*™
inventory, demonstrated the value of using this tool with students (Austin, 2005;
Williamson, 2002).

This study discovered that unstructured extra time spent with a faculty member
had no influence on retention of first-year, first-time students in this cohort. This is
surprising when compared to the research that exists which indicates that meaningful
faculty involvement outside of the classroom can have an impact on student retention
(Braxton & Mundy, 2002; Johnson, 1997; Harth & Starke 2001; Tinto, 1993). There may
be many reasons why faculty involvement was not significant as it relates to persistence
in this study. First, faculty volunteered for this study and no consideration was given to
whether or not the faculty members who committed to the study were gifted in relating to
students in a casual way. Secondly, the faculty members in this study were given an
assignment in which they were asked to meet with students without having any prior
contact with the students with whom they were meeting. This may have been too
intimidating for both the student and the faculty member. Thirdly, many times the respect
that a faculty member gains from a student comes from the faculty member’s gifts in the
classroom. Students were asked to meet with a faculty member with whom they never
had any classroom contact prior to the intervention group meetings. This may have
affected the intervention. And finally, no direction or training was given to the faculty in
order to help them in their relationship building with the students.
Students at small faith-based liberal arts institutions have come to expect outside-of-the-classroom interaction with faculty (Bean, 2005). This study will serve as a reminder that faculty need to be placed in a setting in which their own strengths are evident. Randomly assigning faculty and student interaction is not a guaranteed way of helping faculty and students build relationships outside of the classroom. While the desire at this small faith-based liberal arts institution is to improve this interaction, careful consideration will need to occur regarding how and in what ways that interaction can be most successful.

Research Questions 5 and 6

Research questions five and six analyzed whether a combination of demographic and study variables would predict who would return for classes during the spring semester and who would then persist into their second year of college. Logistic regressions were used to assess whether a combination of demographic and study group variables predicted who would return for their spring semester or register for classes in the spring and return for their sophomore year of college. The analysis supports the findings in questions 3 and 4 and indicates that there are no interactions among variables that need to be further explored, since all the variables but the study group 2 dummy variables (intervention group 2) were found to be not significant.

Discussion of Findings

This study found evidence that the use of the Clifton StrengthsFinder™ inventory in an advising situation with trained student development staff significantly influences persistence of first year, first-time students at a small faith-based liberal arts institution. While there are many factors that can influence a student’s decision to stay or leave an
institution, the *Clifton StrengthsFinder™* inventory and the opportunity to meet with trained student development professionals is a tool that institutions should consider utilizing in their advising of first-year, first-time students. A total of 39 students out of the freshman class of 2005 who completed the study either did not return for the spring semester or did not register for classes in preparation of the fall 2006 semester. Of those 39 students, only 5 who had been randomly assigned to intervention group 2 did not register for classes for fall 2006. One reason for this is could be that the *Clifton StrengthsFinder™* trained student development advisors were more motivated to connect with their advisees. Faculty advisors were given no particular instructions about how to engage with students. The student development advisors had an exciting tool to share with the students and therefore a clearer focus for their intervention. Secondly, once students completed the on-line instrument, they may have been more motivated to learn about their strengths, and were more aware of the content of the meetings and ready to engage with the student development advisors. Finally, student development personnel are staff members who work in service oriented positions on campus and are very familiar with students and students are familiar with them. Therefore, having a less intimidating presence on campus with the students prior to the study may have contributed to the students seeming willingness to complete the intervention.

This study discovered that unstructured extra time spent with a faculty advisor has no significant value in influencing persistence. There were 10 students who did not complete intervention group 1 and there were 13 students who failed to show up for their assigned meetings with their faculty advisor. There were a significantly higher number of students who failed to complete intervention group 1 than the one who did not complete...
intervention group 2. Some possible reasons for this might be that, faculty connect with students differently than student development professionals. Some faculty may not present themselves in a relevant way to students, especially when attempting to connect with them for the sole purpose of building a casual relationship. College faculty may often maintain different levels of involvement on campus and build relationships with students in different contexts and therefore connect with students in different ways. This fact may have been a contributor for both the no-shows and those students who only partially completed the intervention.

Secondly, the comfort level of the faculty member with the student needs to be considered as some faculty are very comfortable with today’s generation of college students and some faculty are not. This may have affected how the faculty pursued the students or how easy it was for some students to pursue the faculty advisor. Since this study took place during freshman students’ first semester of their first year in college, comfort level with college faculty may have contributed to both the no-shows and the students who partially completed the intervention.

Thirdly, to have two 30-minute meetings with a faculty advisor, and have as a goal only to build a relationship and connect with the faculty member may have put some students in an uncomfortable situation and contributed to them not completing the intervention afforded to them. Faculty-to-student interaction is critical to student success and engagement, but often this process has a more programmed purpose.

The Myers-Briggs Type Indicator (MBTI) offers considerable latitude, ambiguity, and variation within each of the personality profiles, pairs, and types, as evidenced in this study. It is this researcher’s opinion that the environment and how it engages students and
their unique personalities is a better predictor of persistence than personality alone.

Institutions should focus on various activities both inside and outside the classroom that encourages all students to engage the campus environment regardless of a student's MBTI type.

**Future Research Options**

This section is an overview of future research options for studies related to retention and use of advising alternatives. Possible programs, opportunities and future research ideas are offered in the following paragraphs.

This study was among the first to use the *Clifton StrengthsFinder™* inventory in a college setting using an experimental design and attempting to influence college persistence. First, further research should apply this study design to institutions of various sizes in order to strengthen the utilization of the *Clifton StrengthsFinder™* inventory. This research study was conducted within the confines of one institution in order to control for the various challenges that developed during the process. The findings would be greatly strengthened if the study were reproduced at other institutions small and large, private and public. The researcher of this study is also employed at the institution in which this study was conducted. The institution and its administration and faculty were very cooperative with its students, staff, time and resources in assisting the researcher in completing this project. The study involved ten faculty members and three student development professionals and a significant amount of time and communications via e-mail. The study also involved consent of the first-year, first-time students enrolled in the fall 2005 freshman foundations course at the institution. The realities involved in duplicating this study would require additional funding such as grant dollars from various
grant funding organizations and the commitment of other institutions and their faculty and staff.

Secondly, an additional longitudinal study should be launched at this institution to measure student retention for present and future first-year, first-time students to strengthen the results of this study.

Thirdly, there should be an additional study to connect the use of the Clifton StrengthsFinder™ inventory and student motivation. The Clifton StrengthsFinder™ inventory could be integrated into a first-year student freshman foundations course, which is currently offered at Grace College. The personnel who would be advising the first-year, first-time students would need to be trained to use the Clifton StrengthsFinder™ inventory as a tool to assist students in an advising setting. It is this researcher’s opinion that students who discover their strengths can use those strengths to overcome the many obstacles and transitions that occur during the first year of college. It could be that when this occurs, a student will experience motivation leading to engagement in the academic experience, which could become a predictor of first-year persistence. All of this, however, is speculative and requires empirical testing. This study did not thoroughly replicate all the characteristics of strengths-based advising. But, this study did realize the benefits of using the Clifton StrengthsFinder™ inventory and its potential impact with first-year, first time students.

Pascarella & Terenzini (2005) state that “the greatest impact on persistence appears to stem from students’ total level of campus engagement particularly when academic, interpersonal, and extracurricular involvements are mutually reinforcing” (p. 647). There continues to be little research using the Clifton StrengthsFinder™ inventory...
as a persistence tool. Discovering new avenues of understanding the impact of this tool would be very beneficial. A qualitative study could be added to compliment future research and uncover the perceptions and experiences of the students who have completed the *Clifton StrengthsFinder™* inventory and advising, and to seek input from the student development advisors as to the value of the intervention.

**Summary**

This study was conducted to determine specific factors related to retention of first-year, first-time students at a small faith-based liberal arts institution. Three primary approaches to advising were implemented in an experimental design: prescriptive, developmental and strengths-based advising. It also incorporated the use of the Myers-Briggs Type Indicator, and student demographic characteristics. Only one of the variables was determined to have a significant impact on short-term retention for this cohort.

The results indicate several items; first, this study found clear evidence that the use of the *Clifton StrengthsFinder™* inventory followed by meetings with a trained strengths student development professional influences first-year persistence. This would support research that concludes that the role of the academic advisor plays a legitimate part in the institution's retention efforts. Secondly, this study found no significant connection between the Myers-Briggs Type Indicator and retention. This is a different result than many other studies that this researcher examined.

Finally, several demographic, pre-college location, and college location (residential and non-residential) variables had no influence on whether a student will return for their second semester or register for classes intending to return for their second year of college.
This researcher sought to expand the research on persistence and how it relates to advising by researching a relatively new model of advising, known as Strengths-based Advising. It is critical that small faith-based liberal arts institutions continue to work hard on retaining first-year, first-time students. The study of retention has been given focused attention over the past 35 years and yet little progress has been made. As institutions continue to examine ways to improve first to second year retention numbers, these results may provide valuable information.
REFERENCES


Walters, E. (2003). Enhancing student learning and retention through the merger of the academic and student affairs unit: The Olivet plan. *Journal of Student Retention, 5*(1), 23-36.


APPENDIX A

Consent of Adult for Participation
Consent of Responsible Adult

Western Michigan University
Department of Teaching, Learning and Leadership
Principal Investigator: Dr. Andrea Beach
Student Investigator: James E. Swanson

You are invited to participate in a research project entitled "Success in the First Year: Impact of Alternative Advising on Students at Private Liberal Arts College." This research is designed to study how advising impacts a student's choice to stay or leave after or during their freshman year in college.

You may be asked to participate in additional advising meetings for the purpose of connection or of identifying strength themes through the use of the StrengthsFinder Inventory. This study is designed for the freshman class of 2005 at Grace College and will not include any other subjects. We would also like to use your Myers-Briggs Type Indicator score and some of your pre-college enrollment information (high school grades, high school rank, gender, age or race) to match with your advising and your enrollment information. Information verifying your advising sessions will be collected, and the information will be returned to me with a form which will verify your attendance at these extra advising meetings. In this process we are collecting verification that the meetings took place, any other notes will be for faculty purposes and not included as data in the study. We would also like to use your MBTI scores in this study. You may not directly benefit from this research, but you will assist in the redesign of future advising approaches. We will protect your information to the greatest extent possible. If you are under the age of 18, do not sign the consent form. You must be 18 years or older to participate in this study.

All information obtained in this study will remain confidential and no personally identifying information will be released. That means that your name will not appear on any papers on which this information is recorded. The data will all be coded, and James E. Swanson will keep a separate master list with the names of participants and the corresponding code numbers. Once the data are collected and analyzed, the master list will be destroyed. All other information will be retained for at least three years in a locked file cabinet in the principal investigators office.

You may refuse to participate or quit at any time during the study. If you have questions or concerns about this study, you may contact either James E. Swanson at 372-5100 extension 6473 or Dr. David Plaster at 372-5100, extension 6132. You may also contact Dr. Andrea Beach, advisor overseeing this dissertation project (269-387-1725). You may also contact the Chair, Human Subjects Institutional Review Board (269-387-8293) or the
vice president for research (260-387-8298) if questions or problems arise during the course of the study.

This consent document has been approved for use for one year by the Human Subjects Institutional Review Board (HSIRB) as indicated by the stamped date and signature of the board chair in the upper right corner. Do not participate in this study if the stamped date is more than one year old.

Your signature below indicates that you have read and/or had explained to you the purpose and requirements of the study and that you agree to participate.

_________________________  ______________________
Signature                  Date

Consent obtained by:       ______________________  
James E. Swanson             Date
Researcher
APPENDIX B

Consent to Participate Script for Intervention Group 1
E-mail Script for inviting students to participate in the intervention group 1.

You have been invited to participate in a research project entitled “Success in the First Year: Impact of Alternative Advising on Students at Private Liberal Arts College.” This research is designed to study how advising impacts a student’s choice to stay or leave after or during their freshman year in college. You might remember that this study was mentioned to you in your freshman foundations class.

You have been selected for one of two intervention groups in the study. My name is Jim Swanson Assoc. V.P. of Student Affairs and you will receive an e-mail from __________________ a faculty member who has volunteered for this study and will desire to connect with freshman students (you) to assist them in their transitions to Grace College. I am writing to request that you attend the two requested 30 minute meetings to talk with __________________________ about how the semester is starting out and how you are adjusting to campus life.

Thanks

Jim Swanson
APPENDIX C

Consent to Participate Script for Intervention Group 2
E-mail Script for inviting students to participate in the intervention group 2.

You have been invited to participate in a research project entitled “Success in the First Year: Impact of Alternative Advising on Students at Private Liberal Arts College.” This research is designed to study how advising impacts a student’s choice to stay or leave after or during their freshman year in college. You might remember that this study was mentioned to you in your freshman foundations class.

You have been selected for one of two intervention groups in the study. My name is Jim Swanson Assoc. V.P. of Student Affairs. You will soon receive an e-mail from ________________ a faculty member and a member of the student development office and a trained facilitator of the StrengthsFinder Inventory. This tool could be very helpful in assisting you in selecting a major or simply in better understanding your strengths. I am writing to request that you complete the StrengthsFinder Inventory using the following information to complete the inventory.

To get started and take the StrengthsFinder, do the following:

1. Go to http://www.strengthsquest.com and click on Sign In
2. In the first time user box, click Validate Your ID Code.
3. Type in your code which is: ______________________
4. Create an Account: Record your e-mail address and give yourself a password. Make the password unique. There are more than 1 million people in the data base and there can be no duplicates. Write this password down somewhere special and don’t lose it. You may want to use it later to log back into the website and use the offered features.
5. Take the Clifton StrengthsFinder. Allow 45 minutes. Don’t allow yourself to be interrupted. Why? You have 20 seconds to respond to each item, before the next question arises. So, complete the StrengthsFinder in one sitting.
6. Print your results and bring them to our meeting for interpretation.

I am also requesting that you connect with ______________ when contacted and enjoy the two 30 minute sessions that will assist you in the interpretation of the themes that have been identified as your strengths through the use of the StrengthsFinder Inventory.

Thanks
Jim Swanson
Assoc. V.P. of Student Affairs

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APPENDIX D

Faculty Advising Log
Faculty Advising Log Sheet

<table>
<thead>
<tr>
<th>Student Name</th>
<th>Student ID Number</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Code # (for researcher only)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Date of Advising Meeting</th>
<th>Time and Length of Meeting</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Date Meeting was scheduled</th>
</tr>
</thead>
</table>

This log sheet is for the purposes of verifying that the advising meetings took place. Any additional notes will be for faculty use and not included as data in the study.
APPENDIX E

Consent to Research from Gallup Organization
Dear Jim:

You have my permission to use StrengthsQuest in your research project as part of your dissertation investigating the efficacy of the StrengthsQuest program in a strengths-based approach to development with the student sample at Grace College. Thanks for letting me know of your intentions to use StrengthsQuest. Let me know if there is anything else I can do to help. Please forward me a copy of your dissertation when possible.

Sincerely,

Mark Pogue
Vice President
The Gallup Organization
APPENDIX F

Consent for Research from Grace College
23 August 2005

Mr. James E. Swanson  
Associate Vice President for Student Affairs  
Grace College  
200 Seminary Drive  
Winona Lake, IN 46590

Dear Jim,

Thank you for your doctoral work at Western Michigan University.

This letter serves as giving consent to access Grace College student information during your dissertation research.

As you conduct your research, I give my assurance that Grace College will abide by all HSIRB policies at Western Michigan University.

I wish you success during the research.

Sincerely,

Ronald E. Manahan  
President

200 Seminary Drive  Winona Lake, IN 46590  1-800-54-GRACE  
"To Know Christ and to Make Him Known"
APPENDIX G

*Clifton StrengthsFinder’s®* 34 Themes
StrengthsFinder's 34 Themes

**Achiever** – People strong in the achiever theme have a great deal of stamina and work hard. They take great satisfaction from being busy and productive.

**Activator** – People strong in the activator theme can make things happen by turning thoughts into action.

**Adaptability** – People strong in the adaptability theme prefer to “go with the flow.” They tend to be “now” people who take things as they come and discover the future one-day at a time.

**Analytical** – People strong in the analytical theme search for reasons and causes. They have the ability to think about all the factors that might affect a situation.

**Arranger** – People strong in the arranger theme can organize, but they also have a flexibility that complements this ability. They like to figure out how all the pieces and resources can be arranged for maximum productivity.

**Belief** – People strong in the belief theme have certain core values that are unchanging. Out of these values emerges a defined purpose for their life.

**Command** – People strong in the command theme have presence. They can take control of a situation and make decisions.

**Communication** – People strong in the communication theme generally find it easy to put their thoughts into words. They are good conversationalists and presenters.

**Competition** – People strong in the competition theme measure their progress against performance of others. They strive to win first place and revel in reason.
**Connectedness**—People strong in the connectedness theme have faith in the links between all things. They believe there are few coincidences and that almost every event has a reason.

**Consistency**—People strong in the consistency theme are keenly aware of the need to treat people the same. They attempt to treat all people fairly by setting up clear rules and adhering to them.

**Context**—People strong in the context theme enjoy thinking about the past. They understand the present by researching its history.

**Deliberative**—People strong in the deliberative theme are best described by the serious care they take in making decisions or choices. They anticipate the obstacles.

**Developer**—People strong in the developer theme recognize and cultivate the potential in others. They spot the signs of each small improvement and derive satisfaction from these improvements.

**Discipline**—People strong in the discipline theme enjoy routine and structure. Their world is best described by the order they create.

**Empathy**—People strong in the empathy theme can sense the feelings of other people by imagining themselves in others’ lives or others’ situations.

**Focus**—People strong in the focus theme can take direction, follow through, and make the corrections necessary to stay on track. They prioritize and then act.

**Futuristic**—People strong in the futuristic theme are inspired by the future and what could be. They inspire others with visions of the future.
**Harmony** – People strong in harmony theme look for consensus. They don't enjoy conflict and; rather, they seek areas of agreement.

**Ideation** – People strong in the ideation theme are fascinated by ideas. They are able to find connections between seemingly disparate phenomena.

**Individualization** – People strong in the individualization theme are intrigued with the unique qualities of each person. They have a gift for figuring out how people who are different can work together productively.

**Input** – People strong in the input theme have a craving to know more. Often they like to collect and archive all kinds of information.

**Intellection** – People strong in the intellection theme are characterized by their intellectual activity. They are introspective and appreciate intellectual discussions.

**Learner** – People strong in the learner theme have a great desire to learn and want to continuously improve.

**Maximizer** – People strong in the maximizer theme focus on strengths as a way to stimulate personal and group excellence.

**Positivity** – People strong in the positivity theme have an enthusiasm that is contagious. They are upbeat and excited about what they are going to do.

**Relator** – People strong in the relator theme enjoy close relationships with others.

**Responsibility** – People strong in the responsibility theme take psychological ownership of what they say they will do. They are committed to stable values such as honesty and loyalty.
**Restorative** – People strong in the restorative theme are adept at dealing with problems. They are good at figuring out what is wrong and finding a way to resolve it.

**Self-Assurance** – People strong in the self-assurance theme feel confident in their ability to manage their own lives. They possess an inner compass that gives them confidence that their decisions are right.

**Significance** – People strong in the significance theme want to be very important in the eyes of others. They are independent and want to be recognized.

**Strategic** – People strong in the strategic theme create alternative ways to proceed. Faced with any given scenario, they can quickly spot the relevant patterns and issues.

**Woo** – People strong in the Woo theme love the challenge of meeting new people and winning them over. They derive satisfaction form breaking the ice and making a connection with another person.

*Taken from the Gallup Organization website. Copyright 2000 The Gallup Organization Princeton, NJ.*
APPENDIX H

HSIRB Approval Form
Date: September 14, 2005

To: Andrea Beach, Principal Investigator
James Swanson, Student Investigator for dissertation

From: Mary Lagerwey, Ph.D., Chair

Re: H SIRB Project Number: 05-08-23

This letter will serve as confirmation that your research project entitled “Success in the First Year: Impact of Alternative Advising on Students at Private Liberal Arts College” has been approved under the expedited category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may only conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: September 14, 2006