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THE EFFECTS OF ACADEMIC AND SOCIAL INTEGRATION ON
TWO-YEAR COLLEGE STUDENTS' PERSISTENCE
IN DEVELOPMENTAL COURSES

A Dissertation
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy
Educational Leadership

by
Mark Kevin Taylor
August 2009

Accepted by:
Dr. Frankie Keels Williams, Committee Chair
Dr. Tony Cawthon
Dr. Lamont Flowers
Dr. Lawrence Grimes

ABSTRACT

The purpose of the study was to investigate the effects of academic integration and social integration on the persistence of students enrolled in developmental courses at a two-year community college. First, the study covered an examination of the levels of academic integration and social integration of students participating in developmental studies. Second, the study included an examination of the relationships between academic integration and persistence, and social integration and persistence.

The first research question explored the levels of academic integration of students enrolled in developmental courses at a two-year college. The second research question explored the levels of social integration of students enrolled in developmental courses at the two-year college. The third research question explored whether relationships existed between the levels of academic integration and persistence of students enrolled in developmental courses at the two-year college. The fourth and final research question explored whether relationships existed between the levels of social integration and persistence of students enrolled in developmental courses at the two-year college.

The methodology selected for this study was the research survey design and included data collection using demographic data, a measure of persistence, and a 34-item survey that measured academic integration and social integration.

The setting of this study was a community college in the Southeastern United States that offered developmental studies coursework in English, mathematics, and reading.

The findings from the study indicated that academic integration and social integration scales had average mean scores slightly above 4 on the Likert scale of 5-1. There were no significant relationships observed between academic integration and persistence. There was a low degree of correlation between one of the subscales of social integration (interactions with faculty) and persistence.

Key words. academic integration, developmental education, persistence, social integration, two-year college

DEDICATION

This dissertation is dedicated to my lovely wife, Lisa Taylor, and my children, Alyssa, Ashley, Kira, and Meagan, the greatest family on Earth.

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CHAPTER I

INTRODUCTION

Research consistently shows that there are large numbers of students who have taken at least one year of developmental coursework prior to completing a college degree (Associated Press, 2006; Cavanaugh, 2003; National Center for Education Statistics, 2000; National Center for Education Statistics, 2008). Most developmental coursework includes remedial work in English, math, and reading. These courses are usually required when students are underprepared for college level work.

A study from the National Center for Education Statistics (NCES) (2000, 2008) described how prevalent developmental coursework is in postsecondary education. In 1995, 28% of all students enrolled in community colleges took at least one year of developmental coursework in a postsecondary institution, and in 2007, 29% of all students enrolled in community colleges took at least one year of developmental coursework in a postsecondary institution (NCES, 2000; NCES, 2008). In 2006, approximately 40% of college students nationwide took at least one developmental course (Associated Press, 2006).

In addition to completing developmental coursework and establishing themselves academically before they can start many regular college courses, students enrolled in developmental courses must adjust socially to the

community college environment (Pascarella & Terenzini, 1998; Tinto, 1975, 1993, 1997). Academic integration and social integration occur as students abandon the values, norms, and behavior patterns from family and peer communities in favor of those of the academic and social subsystems at the institution where they are enrolled (Tinto, 1975, 1993). Tinto (1993) observed that more than 75% of all students leave college because of difficulties related to a lack of fit between the academic and social skills and interests of students, and 25% drop out because of academic failure. Academic integration and social integration of students enrolled in developmental courses is necessary to attain individual goal commitment by the student and institutional commitment by the college (Tinto, 1975, 1993, 1997). Both goal commitment and institutional commitment play a significant role when students decide whether or not to continue their education (Tinto, 1975, 1993, 1997).

Students enrolled in developmental courses are required to integrate academically and socially (Seidman, 2005; Tinto, 1975). For successful academic integration, the students must complete their college classes through rich academic experiences that link the student with the symbolic and the functional content of the college experience (Schuetz, 2005). For students to socially integrate, they must participate in on-campus activities such as student government, student-faculty clubs and associations, and the campus learning

center (Schuetz, 2005). Additionally, students must form friendships and alliances. Both academic integration and social integration are necessary components of persistence (Tinto, 1975, 1993, 1997). Notwithstanding, Tinto (1975, 1993) found that students that were socially but not academically integrated into college dropped out (Seidman, 2005; Tinto, 1975).

Students who attended two-year colleges persisted at a lower rate than those who attended four-year colleges (Libby, 2006). Persistence to graduation rates for students who were taking developmental coursework at two-year colleges was lower than they were for students in regular coursework (Libby, 2006). Adelman (1998) found that the more a student needed to participate in developmental education, the less likely that student was to graduate. Adelman (1998) found that the persistence rate for two-year college students who had taken developmental coursework by their 30th birthday was 45%, compared with 60% of students who had taken no developmental coursework. Additionally, students who had to take developmental reading were even less likely to persist than were other two-year college students (Adelman, 1998).

Statement of the Problem

Concerns about developmental education have revolved around the growing numbers of incoming college students needing developmental courses

and their attrition (Adelman, 1998; Hoyt, 1999; Kielbaso, Dirkx, Min, & Allen, 1998; Libby, 2006; Schuetz, 2005). In general, a significant number of studies showed that many students were enrolled in at least one developmental course (Associated Press, 2006; NCES, 2000), while other studies showed that the persistence of students at community colleges was reduced when compared with students at baccalaureate institutions (Cavanaugh, 2003; Kielbaso, Dirkx, Min, & Allen, 1998; Libby, 2006). As mentioned earlier, approximately 40% of all college students took at least one developmental course (Associated Press, 2006).

The reasons for low persistence among students at baccalaureate institutions included low levels of academic and social integration (Barr & Rasor, 1999; Bean & Metzger, 1985; Bers & Smith, 1991; Boughan, 1998; Clagett, 1998; Eimers & Pike, 1997; Hagedorn, Maxwell, & Hampton, 2002; Heverly, 1999; Karp, Hughes, & O’Gara, 2008; Lanni, 1997; Pascarella & Chapman, 1983; Pascarella, Smart, & Ethington, 1986; Strage, 1999; Strauss & Volkwein, 2001; Terenzini & Pascarella, 1977; Tinto, 1975, 1993, 1997; Wortman & Napoli, 1996; Zhao, 1999). However, there was a paucity of research on the relationship between academic and social integration and the persistence of students enrolled at two-year colleges (Pascarella, 1999; Pascarella and Terenzini, 1998).

Early research showed that more than 40% of two-year college freshmen either did not complete their educational goals or did not return for their second

year (Clark, 1960; Thornton, 1966). In research that followed, two-year college students' revealed that only 24% of students who participated in the two-year college developmental courses had graduated or were still in school four years later (Boylan, Bonham, Claxton, & Bliss, 1992). Thus, approximately 76% of students who took one or more developmental courses in this study had withdrawn from college.

Purpose of the Study

The primary purpose of this study was to investigate the effects of academic and social integration on two-year college students' persistence in developmental courses. More specifically, the researcher investigated the effects of academic and intellectual development, institutional goals and commitments, interactions with faculty, faculty concerns for student development and teaching, and peer-group interactions on persistence of students enrolled in developmental courses.

Research Questions

To determine the effects of academic and social integration on two-year college students' persistence in developmental courses, the following research questions guided the study:

1. What are the levels of academic integration of students enrolled in developmental courses at a two-year college?
2. What are the levels of social integration of students enrolled in developmental courses at a two-year college?
3. Do relationships exist between the levels of academic integration and two-year college students' persistence in developmental courses?
4. Do relationships exist between the levels of social integration and two-year college students' persistence in developmental courses?

Research Methodology

The research methodology used for this study included the research survey design. Students participating in developmental courses at a two-year college in the Southeastern United States were surveyed using a paper-based instrument. A survey using demographic questions, a measure of persistence, and a 34-item instrument adapted from French and Oakes (2004). Academic and Social Integration Scale was used to collect data from students enrolled in developmental courses during the spring semester of 2008. The data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 17.0. Descriptive statistics and correlation analysis were used to analyze the data. The

results of the study were interpreted as they related to the research questions and relevant literature.

Theoretical Framework

Tinto's (1975, 1993, 1997) *Conceptual Schema for Dropout from College* served as the theoretical framework for this study. Tinto's (1975, 1993, 1997) schema affirms that successful academic and social integration are needed if a student is going to graduate from a two-year college or transfer to a four-year college (Tinto, 1975, 1993, 1997). This conceptual schema suggests students who perform at low academic levels and do not integrate academically or socially in college are often dismissed for academic reasons at a greater rate than those who do integrate academically and socially. Because students enrolled in developmental courses enter at an academic disadvantage, Tinto's theory suggests that these students are less academically and socially integrated.

Conceptual Framework

The conceptual framework for this study encompassed demographic variables, independent variables, and dependent variables related to the research questions. The research questions sought to examine the effects of academic and social integration on two-year college students' persistence in developmental

courses. The dependent and independent variables for the research study were as follows:

Demographic variables: (a) Gender, (b) race/ethnicity, (c) program of study, (d) number of remedial courses taken, and (e) Grade Point Average (GPA),

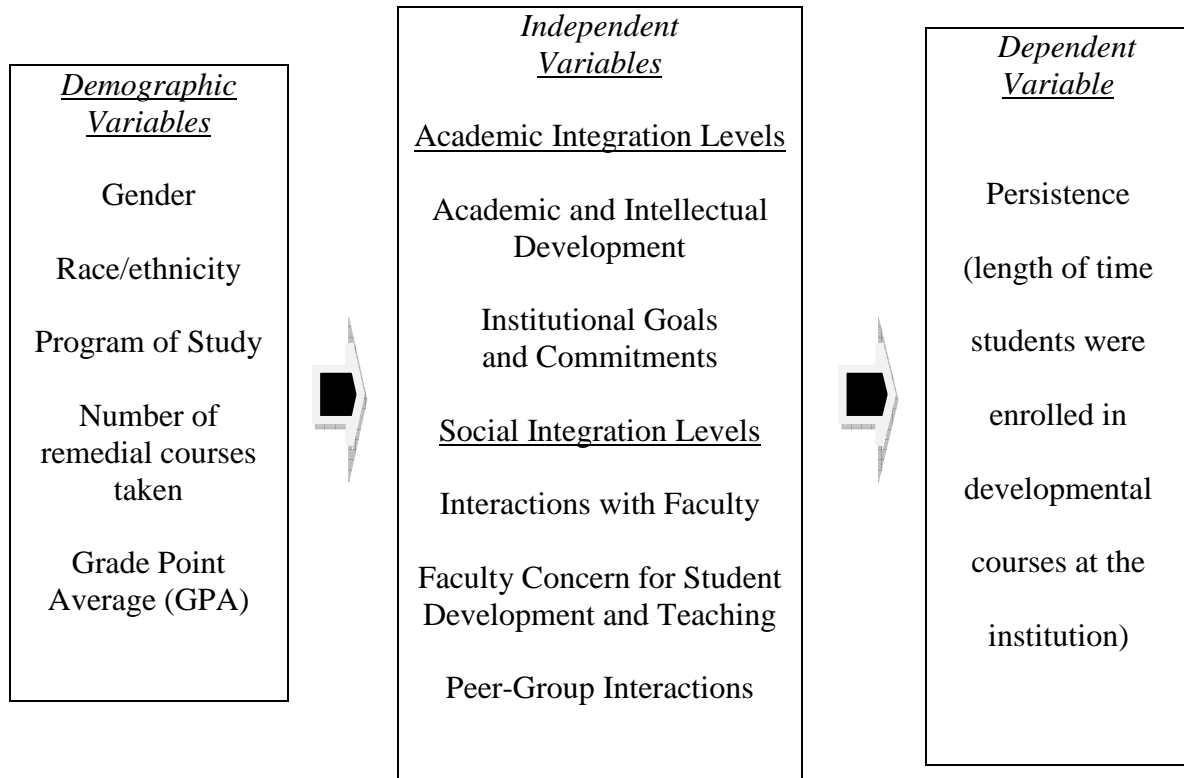
Independent variables: Academic and social integration levels included (a) peer-group interactions, (b) academic and intellectual development, (c) institutional goals and commitments, (d) interactions with faculty, and (e) faculty concerns for student development and teaching, and

Dependent variable: Persistence (length of time students were enrolled in developmental courses at the institution).

Figure 1 illustrates the conceptual framework of this study. The demographic variables, independent variables, and the dependent variable are listed.

Figure 1.

Conceptual Framework of the Study



The demographic variables included gender, race/ethnicity, the program of student the student is enrolled in, the number of remedial courses taken, and the grade point average. The Institutional Integration Scale used in the study consisted of two major variables: (a) academic integration levels, and (b) social integration levels. Academic integration levels included questions concerning academic and intellectual development and institutional goals and commitments. Social integration levels included questions concerning interactions with faculty, faculty concern for student development and teaching, and peer-group

interactions. The major objective of the study was to determine if the attitudes recorded in the Institutional Integration scale had an effect on the persistence of students enrolled in developmental courses at a two-year college.

Definition of Terms

The following are definitions of terms used to define major concepts and operational processes throughout the study.

Academic integration refers to goal commitment of a two-year college student leading to intellectual development, which can be influenced by peer-group interactions and faculty interactions (Tinto, 1975).

Attrition is used to denote the number of two-year college students who drop out from college due to lack of academic integration or lack of social integration (Tinto, 1993).

Developmental education refers to coursework taken at college that does not count as college credit, and is considered on a secondary school level; developmental education has also been called remedial education over the years (Kielbaso, Dirkx, Min, & Allen, 1998; McCabe, 2001; National Center for Education Statistics, 2000; Shaw, 1997).

Institutional integration is the combination of academic integration and social integration, which leads to goal commitment and institutional commitment for the student (Tinto, 1975).

Persistence refers to the completion of at least two semesters of college or developmental studies work (Bailey & Alfonso, 2005; Barr & Rasor, 1999; Bers & Smith, 1991; Karp, Hughes, & O'Gara, 2008).

Postsecondary education is coursework taken at college that is considered as being on a post high school graduate level (Bauer & Casazza, 2005; Cohen & Brawer, 1996).

Social integration is the interaction(s) of peer-group interactions and faculty interactions, which can be influenced by grade performance and intellectual development. Improved social integration leads to positive goal commitment and institutional commitment by the student. This leads to decision by the student(s) not to drop out (Tinto, 1975).

Two-year colleges are also known as community colleges. In South Carolina the two-year colleges are referred to as Technical Colleges (Cohen & Brawer, 1996; State Board of Technical and Comprehensive Education, 1974).

Significance of the Study

A study of the significance of academic and social integration on the persistence of students enrolled in developmental courses in two-year colleges expands the findings on student retention and persistence in public higher education institutions in the United States of America. An examination of the effectiveness of support programs, learning outcomes, and the quality of instruction at two-year colleges must be examined (Hoyt, 1999). Moreover, strategies and interventions are needed due to the large number of developmental students who drop out of two-year colleges (Hoyt, 1999). The results of this study will provide administrators, deans, directors, and faculty members' with valuable information for working with developmental students enrolled at two-year colleges. Additionally, this study broadens the knowledge base that is available in research on academic and social integration and persistence at the two-year college level.

Delimitations

This study was confined to an examination of the effects of social and academic integration on persistence of students enrolled at a single two-year institution in the Southeastern United States. The sample for the study consisted of students enrolled in one or more developmental courses during the spring

2008 semester. The intent of this study was to add to the body of extant research literature on academic and social integration of students in two-year colleges.

Organization of the Study

The study is divided into five chapters. The first chapter consists of the problem statement, the purpose of the study, research questions, and research methodology, the theoretical framework, and conceptual framework. The chapter concludes with the significance of the study.

The second chapter provides a review of literature. The topics presented include developmental education in the two-year college, Tinto's conceptual schema for student withdrawal, and findings on academic and social integration.

The third chapter covers the research questions and includes the survey research design and methodology used in this study. This section also presents information on data collection and data analysis procedures.

The fourth chapter presents the results of the analysis of the survey data. Descriptive statistics of the survey participants and statistical results from correlation analysis were used to answer the research questions.

The fifth chapter summarizes the findings and conclusions of the study. Conclusions, general recommendations, recommendations for further research,

and implications for practice related to developmental education are presented along with the limitations of the study.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

This chapter presents the literature on academic and social integration on two-year college students' persistence in developmental courses. The literature review consists of three sections. The first section provides general information on developmental education and enrollment in two-year colleges. The second section explains Tinto's (1975, 1993, 1997) *Conceptual Schema for Dropout from College* followed by related research on student withdrawal. The third section discusses research on academic and social integration at two- and four-year colleges. The chapter concludes with a summary of the related literature.

Developmental Education

Developmental education supports the students' growth on their academic and personal profiles that are underprepared (National Center for Developmental Education (NCDE), 2009). Developmental education includes instruction, advising, counseling and tutoring (NCDE, 2009). Developmental education is offered in programs for traditional and non-traditional students who are assessed based on their needs to develop skills and talents for a better successful college (NCDE, 2009).

Developmental education has had numerous meanings over the years. Developmental education has been referred to as “remedial” and “compensatory” (Bauer & Casazza, 2005). Also, developmental education consists of instructional activities to prepare students for college English composition and college algebra (Tinto, 1998).

Developmental Education in the Two-year College

Developmental education has existed since the early days of two-year colleges; the concept of developmental education spread in the 1960s (Bragg, 2001). Many two-year colleges adhere to the concepts that Eells discussed in the 1930s. Eells’ (1931) vision of education consisted of popularization, developmental education, terminal education, and counseling.

Numerous researchers attributed the rise in developmental education to the open access to high school graduates (Cohen & Brawer, 1996). Therefore, the mission of the two-year college was that of open access (Cohen & Brawer, 1996). As a result of open access, approximately 40% of two-year college incoming candidates enrolled in developmental studies (Grubb, 1999; Lewis, Farris, & Greene, 1996). The two-year colleges responded to student enrollment by “accommodating the different types of students without turning anyone away” (Cohen & Brawer, 1996, p. 256).

Need for Developmental Education

Research indicated that approximately 40% of students had taken at least one year of developmental coursework prior to completing a post-secondary degree (Associated Press, 2006; Cavanaugh, 2003; NCES, 2000). For example, the attrition rate of two-year college students at Michigan's Riverdale College was approximately 40% (Kielbaso, Dirkx, Min, & Allen, 1998). The Michigan study concluded that students who finished developmental coursework were more successful in regular coursework than those who should have been enrolled in developmental studies (Kielbaso et al, 1998).

The remediation of college students has become the responsibility of two-year institutions (Horn & McCoy, 2009). Horn and McCoy (2009) examined whether placement into developmental coursework affected student outcomes in an introductory college-level English course. The researchers study showed a greater percentage of students that completed developmental English completed English Composition I than non-developmental English students. Also, the study explained that students who were ill-prepared for regular English coursework benefitted from taking developmental English.

Researchers observed that the single highest correlate with under-preparedness was low-socioeconomic status, and that minority students disproportionately had the highest poverty status (McCabe, 2001). In addition,

these students had to be placed in developmental coursework to make the transition from high school to college (Shaw, 1997).

Benefits of Developmental Education

Researchers found that students who participated in developmental studies programs at two-year colleges graduated or transferred to four-year baccalaureate colleges at a rate comparable or higher to non-developmental students (Boylan & Saxon 1998). In addition, between 75% and 85% of those who passed developmental coursework in English or mathematics passed their first college-level courses in these subjects (Boylan & Saxon, 1998). When the grades of developmental students were compared to those of non-developmental students who needed developmental studies, the grade point averages (GPAs) of developmental students completing developmental coursework were significantly higher than students who needed developmental studies, but were not offered them (Kielbaso, Dirks, Min, & Allen, 1998). This research confirmed the benefits of taking and completing a developmental education program (Boylan & Saxon, 1998).

Kolajo (2004) stated that a predominant number of students in Cecil Community College, Maryland, took developmental coursework. From 2000-2002, over 61% of Cecil Community College students took at least one developmental course. Kolajo (2004) found a relationship between the number

of developmental courses taken and the length of time to commencement. As the number of developmental courses increased, so did the time toward commencement (Kolajo, 2004).

McCabe (2000) found that 41% of entering two-year college students was underprepared in at least one of the basic skills of reading, writing, and math. First-generation students' life experiences contributed to the development of skills that were perceived as critical to success in college (Byrd & MacDonald, 2005). Another theme that emerged from this study was that traditional aged first-generation college students were at greater risk to be ready for college than mature first-generation college students. Cross (1968) found that researchers tended to view nontraditional students as less prepared for the demands of college.

Tinto's Conceptual Schema for Student Withdrawal

Tinto's (1975) representative schema defined the ways in which academic integration and social integration led to institutional integration. Tinto's theory explained that students must be directly engaged in their education or they will neither graduate from a two-year college nor transfer to a four-year baccalaureate college.

Tinto (1975, 1993) described the processes of academic integration and social integration as students departed from the values, norms, and behavior patterns from family and peer communities and gradually adopted the values, norms, and behavior patterns of the academic and social subsystems at the institution where they were enrolled. If a student had well-defined goals and the institution's mission was based on student success, the student had an increased chance of a positive college experience. Moreover, the academic system fostered academic performance and intellectual development; the social system consisted of peer-group interactions and faculty interactions (Tinto, 1975, 1993).

Tinto's Conceptual Schema for Dropout from College (1975) included three areas that determined the success that students have had in college: (a) family background, (b) individual attributes, and (c) pre-college schooling. These three areas affected each other, and contributed to student goal commitment and institutional commitment. In addition, academic performance and intellectual development led to academic integration, which reinforced both goal commitment and institutional commitment (Tinto, 1975). Peer-group interactions and faculty interactions led to social integration, which reinforced goal commitment and institutional commitment (Tinto, 1975). Finally, the students' goal commitments led to decisions on whether or not they dropped out (Tinto, 1975). Tinto's research also indicated that college students who

performed at low academic levels and do not integrate academically or socially were often dismissed on academic grounds at a greater rate than those who integrated academically and socially (Tinto, 1975).

Astin (1984) defined student involvement as the amount of physical and psychological energy that the student devotes to academics, campus organizations, their professors, and their peers. Involved students actively participated in their education through on-campus events and organizations. In addition, these students adopted good study habits (Astin, 1984). Conversely, students who had not actively participated in their education had not attended on-campus events or joined organizations. Thus, their study habits were inferior to those of involved students. Astin expanded Tinto's concept of academic integration and social integration by student involvement and its importance to Tinto's Conceptual Schema for Dropout from College.

Research Using Tinto's Theory in Two- and Four-year Colleges

Pascarella and Terenzini (1980) developed an Institutional Integration Scale that assessed the major dimensions of Tinto's model. Pascarella and Terenzini's scale was used to establish the reliability and validity of the instrument. In the summer of 1976, a random sample of 1905 incoming freshmen student body at Syracuse University was sent Institutional Integration Scales (IIS) to complete, and a total of 1457 usable student responses were received

(Pascarella & Terenzini, 1980). The results supported Tinto's model. Moreover, the scale correctly identified 78.9% of persisters and 75.8% of the students who would later drop out. Moreover, a strong contribution of student-faculty relationships was measured in faculty concern for student development and teaching subscales section of the Institutional Integration Scale (IIS) for a positive correlation for persistence (Pascarella & Terenzini, 1980).

Tinto's (1975) model examined what influenced integration before students attended college, what influenced integration while in college, and how integration led to a decision to persist or withdraw. Researchers scrutinized whether Tinto's model of student attrition was the most appropriate (Brunsdan, Davies, Shevlin, & Bracken, 2000). The investigation determined that the data do not support the model used by Tinto (Brunsdan et al., 2000). Social integration was influenced by organizational attributes like institutional communication, fairness in policy and rule enforcement, and participation in decision making (Berger & Braxton, 1998). Lack of academic integration was associated with the potential for student withdrawal (Tinto, 1975).

Persistence was a key factor in the evaluation of two- and four-year colleges. Therefore, colleges have initiated programs for at-risk students and developmental studies programs (Lang, 2001-2002). Baker, Caison, and Meade (2007) examined the gender-related differential predictive validity of the five

subscales of the Institutional Integration Scale. This study was emailed to 3,846 students during the second month of the fall semester; 810 female students and 703 male students responded to the survey. The researchers found that the scores on the Institutional Integration Scale were valid in predicting student retention and student withdrawal across gender (Baker et al., 2007).

Research about persistence in engineering education has been in existence in the education field over the past two decades (Zhang, Anderson, Ohland, & Thorndyke, 2004). This study examined several independent variables (gender, high school rank), and several dependent variables (cumulative GPA, university enrollment, and major enrollment) (Zhang et al., 2004). The study showed that persistence was related to prior academic attainments (high school rank, SAT scores), GPA, and motivation (Zhang et al., 2004). The researchers noted that factors related to students' interests and perceived ability in math and science may be useful in determining student success (Astin, 1993).

Numerous studies have used Tinto's Conceptual Schema for Student Withdrawal (1975) and the Institutional Integration Scale developed by Pascarella and Terenzini (1980). Coll and Stewart (2008) examined the utility of retention assessment of students using the Institutional Integration Scale (Pascarella & Terenzini, 1980). This scale was used to explore differences between at-risk and not-at-risk students. Students that were identified as at-risk

were either on probation or had a previous academic suspension. Researchers found that both groups were equally satisfied with their peer-group relations, and equally dissatisfied with their interaction with faculty members. The study suggested that collaboration between student and academic services was necessary to promote positive institutional integration. Moreover, collaboration between the faculty and counseling service strengthened faculty-student relationships (Archer & Cooper, 1999).

Academic and Social Integration

Students' success in two-year colleges depended on their academic integration and social integration (Tinto, 1975, 1993, 1997). If two-year college students were not prepared for college, they had problems succeeding (Tinto, 1975, 1993, 1997). Thus, positive academic integration and social integration experiences were needed in two-year colleges if students were going to be successful.

Social integration in two-year colleges has not been as consistent in predicting student persistence as academic integration (Beil, Reisen, Zea, & Caplan, 1999; Braxton, Hirschy, & McClendon, 2004). Bean and Metzger (1985) found that nontraditional students at a two- or four-year college had less interaction with faculty and students (social integration factors) than traditional

students did. Nontraditional students were affected more by their external environment than by the social integration variables that affected traditional students. Further research by investigators indicated that nontraditional students found it more difficult to participate in institutional outreach initiatives than traditional students did (Jalomo, 1995; Rendón, 1994).

Academic integration was found to influence persistence at four-year and two-year commuter colleges; whereas, social integration influenced persistence at four-year and two-year residential colleges (Pascarella & Chapman, 1983). Also, researchers found that social integration was required for traditional students, and that academic integration was required for successful nontraditional students (Bean, 1985; Jalomo, 1995; Rendón, 1994). Through path analysis, Pascarella and Chapman (1983) showed that academic and social integration was important in determining persistence at two- and four-year institutions of higher education.

Dodge, Mitchell, and Mensche (2009) found a moderate relationship between motivation and academic and social integration on four-year college students in athletic training education programs. Positive academic integration had significant positive effects on the persistence of the students (Dodge et al, 2009). Additionally, the students attributed peer group support to their decisions to persist (Dodge et al, 2009).

Pascarella, Smart, and Ethington (1986) established that positive academic and social integration experiences had positive effects on persistence with first-time two-year college students. Bers and Smith (1991) observed that students who integrated both academically and socially had higher persistence and graduation rates at community colleges. Also, Napoli and Wortman (1998) found that social integration was more indicative of two-year college students' persistence from term-to-term while academic integration was more indicative of two-year college students' year-to-year persistence, but as the time between the initial assessment of social and academic integration and persistence increased, the relationship became less noticeable.

Peer-group Interactions

Elkins, Braxton, and James (2000) examined how Tinto's Conceptual Schema for Dropout from College influenced students' departure decisions through the concept of separation which is disassociation from one's previous communities. Elkins et al. (2000) also stated that students who pass separation were more likely to return to college for the second semester. Additionally, successful passage was enhanced by students receiving support from members of their past communities (Elkins et al, 2000). Successful passage may require students to reject the attitudes and values of members of their communities when those attitudes and values were damaging (Elkins et al., 2000). Another

conclusion was that the separation stage of Tinto's stages of incorporation into the memberships of communities of colleges and universities possess construct validity (Elkins et al., 2000). The separation stage influences early withdrawal from college (Elkins et al., 2000).

Minority Group Interaction. Lundberg, Schreiner, Hovaguimian, and Miller (2007) examined whether students' race/ethnicity and first-generation student status affected student involvement and learning and they concluded that first-generation college students were less involved in course learning, fine arts, science/quantitative experiences, and involvement with students who were different, but they reported greater academic gains. Many first-generation college students did not have considerable social or cultural capital, so they must be guided into programs that will assist them in college (Lundberg et al., 2007). Programs such as TRiO were created as a safe haven for first-generation students (Lundberg et al., 2007).

Flowers (2006) found that African American males attending two-year colleges are less likely to attend study groups outside of the classroom than their counterparts at four-year institutions. The likelihood for informal and social interactions with advisors and faculty members outside the classroom was also higher for African American males at four-year institutions than for African American males at two-year institutions. The impact of attending a two-year

institution extended to participation in school activities such as school clubs, intramural sports, as well as social activities, with four-year institutions leading to a higher participation rate (Flowers, 2006).

Student effort and academic motivation impacted academic and social integration, but it can “be argued that the academic and social culture of the institutional environments at two-year and four-year institutions may also play a prominent role” (Flowers, 2006, p. 282). The work concluded that minority students such as African American males could benefit from additional interventions and scholarly inquiry to improve their academic achievement and retention in college.

Academic and Intellectual Development

Tinto (1997) administered two surveys on academic and social integration to students at Seattle Central Community College in the Coordinated Studies Program (CSP). The first questionnaire asked about student attributes, prior education, life situations, educational intentions, learning preferences, perceptions of ability, and attitudes to education (Tinto, 1997). The second questionnaire explored respondents’ life situations, classroom and out-of-classroom activities, estimates of learning gains, perceptions of the institution, and expectations of subsequent enrollment (Tinto, 1997). Tinto (1997) completed three one-week site visits to collect qualitative data from interviews with faculty

and students, observation and document review. From the questionnaires and the qualitative testing, Tinto found that students who participated in the CSP through the community college persisted and viewed the college more favorably than those who did not (Tinto, 1997).

Tinto (1997) determined that students who participate in learning communities were able to develop the support network that they need. Students were influenced by participating in a setting in which learning derives from a variety of sources (Tinto, 1997). Furthermore, the students' perceptions of intellectual gain and their academic performance as measured by GPA were greater in learning communities than in traditional settings (Tinto, 1997).

Factors affecting academic performance and outcomes were measured at Prince George's Community College in Maryland from 1994 to 1998 (Zhao, 1999). The results of 1,249 under-prepared students were measured as either achievers or nonachievers (Zhao, 1999). Achievers were defined as students who earned at least 30 credits with a cumulative GPA of 2.0, earned a degree or certificate from the college, or transferred to a four-year college (1999). Nonachievers were defined as all other students whether enrolled in the college or not. Therefore, a student with a 1.9 GPA would be considered a nonachiever. This study found that cumulative credit hours earned, good academic standing, cumulative GPA, course load, the number of developmental courses taken, and race/ethnicity

affected academic outcomes (Boughan & Clagett, 1995; Campbell & Blakely, 1996; Long & Amey, 1993).

Academic development at Historically Black Colleges and Universities (HBCUs).

Flowers (2002) found that African-American students at Historically Black Colleges and Universities (HBCUs) have higher self-reported academic and social gains than non-HBCUs. The study examined teacher effectiveness and student-faculty interaction influence learning outcomes for African American students in college. Overall learning outcomes were enhanced for African-American students at HBCUs.

Flowers (2004-2005) researched students' precollege characteristics, students' perceptions of their goals and perceptions of institutional commitment, students' perceptions of the institutional environment, and students' college experiences and found that it had strong correlations to predicting African-American student retention. The results agree with Tinto's (1975) findings that pre-college characteristics were essential in predicting institutional integration, which led a decision to persist or not.

Institutional Goals and Commitments

Berger and Braxton (1998) examined how organizational attributes affected social integration and the student withdrawal process. Organizational attributes were characterized by institutional communication (academic rules,

social rules, course requirements, and graduation requirements), fairness in policy and rule enforcement (enforcement of academic rules, enforcement of social rules, grading, and awarding scholarships), and participation in decision making (kinds of course assignments, amount of course assignments, making social rules, and making academic rules) (Berger & Braxton, 1998). This study established that organizational attributes had an important role in social integration (Berger & Braxton, 1998). According to Berger and Braxton (1998), the findings of this study assisted in elaborating how Tinto's Conceptual Schema for Dropout from College as organizational attributes, accounted for social integration, subsequent institutional commitment, and intention to persist.

Interactions with Faculty

Terenzini and Pascarella (1977) established academic and social integration as important factors in determining freshman attrition. Five hundred randomly chosen freshmen at Syracuse University were sent surveys, and 379 usable surveys were returned (Terenzini & Pascarella, 1977). The researchers concluded that the stayers reported more informal contacts with faculty members than leavers, supporting Tinto's view that informal faculty contact is related to institutional integration (1977). In addition, faculty members were important in the socialization of the students to the institution. Students that were stayers were more favorable to faculty members.

Two-year colleges are not known for fostering social activities focusing on academic integration for both male and female students (Hagedorn, Maxwell, Rodriguez, Hocevar & Fillpot, 2000). However, the classroom is the main point of student contact with the college (Hagedorn et al., 2000). Thus, colleges must encourage social integration in academic activities for both male and female students (Hagedorn et al., 2000). Faculty members can promote collaborative learning, informal study groups beyond the classroom, and learning communities (Hagedorn et al., 2000; Tinto, 1998).

Faculty Concern for Student Development and Teaching

A study at American River College (California) examined freshmen persistence as measured by the attainment of academic benchmarks (Barr & Rasor, 1999). This study concluded that approximately 60% of students who entered in the fall persisted into the following semester (Barr & Rasor, 1999). This study also found that as these students advanced through academic benchmarks of course completion, their performance improved. Another result of this study was that freshmen, associated with a student service organization such as disabled student services, partnership to assure college entry, athletics, equal opportunity, and math engineering science achievement persisted at a higher rate than other freshmen (Barr & Rasor, 1999).

Newby (1982) surveyed faculty members at HBCUs in the social sciences to identify the most salient goals of faculty members at HBCUs and found that most HBCU faculty members considered teaching to be one of their most important concerns. In addition, Newby found that conducting research was one of the least important goals of HBCU faculty members. Newby (1982) concluded, that most social science faculty members viewed the development of research ability as the least important goal of their institution and that it proved HBCUs are essentially teaching institutions (Flowers, 2002).

Researchers found that a majority of students surveyed at two urban community colleges in the Northeast developed a sense of attachment to their host institution and that this sense of attachment was related to their persistence in the second year of college (Karp, Hughes, & O’Gara, 2008). These results indicated that integration, including social integration, was developed through participation in information networks (Karp et al., 2008). The researchers suggested integrating information networks into academic activities (Karp et al., 2008) serving the dual purpose of increasing academic and social integration.

Summary

This chapter presented background and historical information on developmental education at two-and four year colleges. Information on

academic and social integration was presented in relation to peer-group interactions, academic and intellectual development, institutional goals and commitments, interactions with faculty, and faculty concern for student development and teaching.

CHAPTER III

METHODOLOGY OF THE STUDY

The purpose of this study was to examine the relationships between academic integration and persistence, and social integration and persistence of students participating in the developmental courses at a Southeastern two-year college in the United States of America. The data were obtained from a survey of academic and social integration on students enrolled in remedial courses in a two-year community college given during the spring 2008 semester. The four research questions addressed in the study were:

1. What are the levels of academic integration of students enrolled in developmental courses at a two-year college?
2. What are the levels of social integration of students enrolled in developmental courses at a two-year college?
3. Do relationships exist between the levels of academic integration and persistence of students enrolled in developmental courses at a two-year college?
4. Do relationships exist between the levels of social integration and persistence of students enrolled in developmental courses at a two-year college?

This chapter includes a description of the study's research design, sampling procedures, data source, methods of analysis, and limitations. The last section summarizes the research procedures used in the study.

Research Design

The survey research design was the research methodology selected for the study. The survey research design was appropriate because it allows researchers to make inferences about the whole population though they study a smaller sample (Kerlinger & Lee, 2000). A survey provides "a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population (Cresswell, 2003, p. 153). Further, the research survey method was selected for the study because the researcher did not have access to all of two-year college students who are participating in developmental studies.

Participants of the Study

To measure the variables of social and academic integration, a cross-sectional convenience sample of students enrolled in the developmental studies curriculum was surveyed. This survey was administered to 206 students enrolled in developmental studies at a southeastern two-year college during the spring 2008 semester. One incomplete survey was rejected from data analysis.

Some students were not surveyed because they were absent or they had taken the survey in another class. One student declined to participate.

The two-year college used as the site of this study had an enrollment of 15,070 credit-seeking students on four campuses during 2007-2008. Students at this two-year college have the opportunity to earn two-year college transfer associate degrees and two-year technical associate degrees, diplomas, and certificates in 160+ programs. The programs include Associate in Arts degrees, Associate in Science degrees, Health Science Degrees, Advanced Technical Certificates, Applied Technology Diplomas, Associate in Applied Science Degrees, College Credit Certifications, College Preparatory Curriculum (developmental studies), and English for Academic Purposes (English as a Second Language). The participants were students enrolled in the College Preparatory Curriculum (developmental studies) during the spring 2008 semester.

Instrumentation

The survey titled, 'A Survey of Academic and Social Integration on Students Enrolled in Remedial Courses in a Two-Year Community College' was used to collect the data for the study. The survey consisted of demographic variables including gender, race/ethnicity, the program area, the number of developmental courses taken, and the grade point average (GPA). The

independent variables consisted of thirty-four survey items divided into two major categories: academic integration and social integration. Academic integration was further divided into academic and intellectual development, and institutional goals and commitments. Social integration was divided into interactions with faculty, faculty concern for student development and teaching, and peer-group interactions. The thirty-four survey items used to measure academic and social integration were adapted from an Institutional Integration Scale used by French and Oakes (2004), Pascarella and Terenzini (1980) and Tinto (1975, 1993, 1997). Finally, the survey consisted of one dependent variable; persistence.

Table 1 depicts the variables and coding used in the study to analyze the data. The table lists the variables, the variable names, and the definition of the survey variables. Part one consists of the demographic variables and the one dependent variable. Part two consists of the 34 survey items that are divided into five scales. These survey items that accounted for the independent variables were derived from the Institutional Integration Scale by French and Oakes (2004). The original Institutional Integration Scale was created by Pascarella and Terenzini in 1980.

Table 1.

Academic and Social Integration Survey Variables

Variables	Variable Name	Definition
Part 1: Demographic		
Gender	Gender	1 = Female, 2 = Male
Race/ethnicity	RE	1 = African-American 2 = Asian/Pacific 3 = Caucasian 4 = Native American 5 = Spanish/Hispanic 6 = Other
Program	DP	1 = Art and sciences 2 = Automotive Tech. 3 = Bus. & Public Service 4 = Engineering Tech. 5 = Health Sci. & Nursing 6 = Industrial Technology 7 = Technical Business
Number of remedial courses taken	RCT	1 = 1 remedial course 2 = 2 remedial courses 3 = 3 remedial courses 4 = 4 remedial courses 5 = ≥ 5 remedial courses
Grade Point Average	GPA	1 = A – 4.0 2 = B – 3.0-3.99 3 = C – 2.0-2.99 4 = D – 1.0-1.99 5 = F – below 1.0 6 = Unknown/just started

Variables	Variable Name	Definition
Part 1: Dependent		
Persistence	Persistence	1 = 1 semester 2 = 2 semesters 3 = 3 semesters 4 = 4 semester 5 = ≥ 5 semesters
<p>Persistence was defined as the length of time students were enrolled in developmental courses at the institution. The length of time selected was by semester because students did not necessarily attend the two-year college throughout the year.</p>		
Part II: Independent		
Institutional Integration Scale		
Peer-Group Interactions	PEER	Mean score of 10 items, Continuous
Interactions with Faculty	INTERACT	Mean score of 5 items, Continuous
Faculty Concern for Students	FACULTY	Mean score of 5 items, Continuous
Academic and Intellectual Development	ACADEMIC	Mean score of 8 items, Continuous
Institutional and Goal Commitment	GOAL	Mean score of 6 items, Continuous

The development of the individual items in 'A Survey of Academic and Social Integration on Students Enrolled in Remedial Courses in a Two-Year Community College' were designed to (a) use items that had previously been tested when possible, and (b) ensure consistency with past Institutional Integration Scales when items were not identical. Detailed instrument specifications were written for each item, including variable names and definitions, and reliability of the major dimensions of the Tinto model (French & Oakes, 2004; Pascarella & Terenzini, 1980).

Validity and Reliability. Pascarella and Terenzini's (1980) study explored academic integration and social integration of students enrolled in 4-year colleges indicated the appropriateness of using the Institutional Integration Scale based on Tinto's Conceptual Schema for Dropout from College. Pascarella and Terenzini's (1980) Institutional Integration Scale was the original scale that was developed for research on academic integration and social integration. The validity and reliability of the items were evaluated for the 30-item original scale used before development of this 34-item scale. The validity and reliability were evaluated after development of the thirty-four item scale (French & Oakes, 2004). French and Oakes (2004) revised Institutional Integration Scale had higher internal consistency reliability (.92 for the 34-item scale versus .83 for the 30-item scale), higher item discrimination ($M=.50$, $SD=.10$ with a range from .26 to .64 for

the 34-item scale versus $M=.36$, $SD=.12$ with a range from .15 to .51 for the 30-item scale), and higher correlations among the subscale scores, and between the subscales (.19 to .33 for the 30-item scale versus .23 to .66 for the 34-item scale) and total scale scores (.57 to .70 for the 30-item scale versus .59 to .80 for the 34-item scale). The researchers had developed two models to test the adequate fit to the data of the 34-item scale. The first model examined academic and social integration. The goodness-of-fit index (GFI) was 1.00, the comparative fit index (CFI) was .99, and the root mean square approximation (RMSEA) was .04; however there were values outside the expected range (French & Oakes, 2004). The second model examined social and academic interactions with faculty. The GFI for model two was .99, the CFI was .99, the RMSEA was .06, and the model contained no out-of-range parameter values (French & Oakes, 2004). Thus, the revised model used by French and Oakes had adequate fit to the data (2004).

Table 2 provides a display of the Cronbach's alpha obtained for this study. A total Cronbach's alpha was provided as well as Cronbach's alpha for academic integration and social integration and the five subscales.

Table 2.

Cronbach's Alpha for Institutional Integration Scale

	Cronbach's Alpha
Total Cronbach's Alpha	.92
Cronbach's Alpha for Academic Integration	.82
Cronbach's Alpha for Academic and Intellectual Development	.84
Cronbach's Alpha for Institutional Goals And Commitments	.76
Cronbach's Alpha for Social Integration	.90
Cronbach's Alpha for Interactions With Faculty	.88
Cronbach's Alpha for Faculty Concern for Student Development and Teaching	.91
Cronbach's Alpha for Peer-Group Interactions	.86

Cronbach's alpha provides a measure of reliability or internal consistency (Berger & Milem, 1999; French & Oakes, 2004), and measures the extent to which there is cohesiveness or interrelatedness among the items and or subscales (Isaac & Michael, 1995). The coefficient alpha obtained for the thirty-four item survey was .92 and it ranged from .76 to .89 for the five subscales.

The reliability of 'A Survey of Academic and Social Integration on Students Enrolled in Remedial Courses in a Two-Year Community College' was well within the range needed to consider the survey reliable. The total

Cronbach's alpha for this study was .92. A Cronbach's alpha of .70 or greater is considered reliable. Researchers define Cronbach's alpha as a measure of reliability that ranges from 0 to 1, with values of .60 to .70 deemed the lower limit of acceptability (Hair, Anderson, Tatham, & Black, 1998).

The demographic variables were gender, race/ethnicity, program of study, number of developmental courses taken, and the grade point average (GPA).

The two independent variables, which were further broken down into five independent variables, were obtained from data collected from a two-year college in the Southeastern United States in which the students were enrolled.

The scales consisted of academic and intellectual development, institutional goals and commitments, interactions with faculty, faculty concern for student development and teaching, and peer-group interactions. Additionally, the independent variables had five levels consisting of strongly disagree, somewhat disagree, not sure, somewhat agree, and strongly agree. The dependent variable was persistence. Since all developmental coursework is completed during the first two years of college and most attrition occurs during the first year and before the start of the second year, it was appropriate to administer a survey instrument to students participating in developmental studies (Tinto, 1993).

Data Collection

The survey for this study was validated for exemption from continuing review by the Institutional Review Board (IRB) at Clemson University on March 13, 2008. The data for this study were obtained by administering the survey instrument during the spring 2008 semester. Participants were selected by working with the Coordinator for Developmental Studies in order to select twelve classes. The survey was administered to 206 students over a period of two days. Twelve of 55 developmental classes were sampled over a two-day period. Four classes were developmental English, four were developmental math, and four were developmental reading. Two levels for each subject were surveyed. Level one consisted of developmental English, developmental mathematics basics, and developmental reading. Level two consisted of introduction to composition, developmental mathematics, and critical reading.

All students were asked to sign and print their names beside the number of the survey that they were given in a ringed notebook provided by the test administrator. Next, students were given approximately 30 minutes to complete the survey after pencils were given to use and directions were given by the survey administrator. Then, the surveys were collected after they were completed. Finally, the surveys were secured by the survey administrator.

Data Analysis System

The Statistical Package for the Social Sciences (SPSS) version 17.0 software was used to analyze the data for the study. SPSS was used to calculate Cronbach's alpha, descriptive statistics, and Pearson correlation analysis.

Research Questions 1 and 2 were analyzed by determining the means for the 34 survey items. Research Questions 3 and 4 were analyzed by computing correlation analysis.

Summary of the Research Procedures

The primary purpose of this study was to investigate the effects of academic and social integration on two-year college students' persistence in developmental courses. Four questions were developed to meet the purpose of the study. The survey data used in the study were obtained from A Survey of Academic and Social Integration on Students Enrolled in Remedial Courses in a Two-Year Community College. Means were determined for analyzing the first two research questions, and correlations were computed for analyzing the two other research questions.

Chapter IV covers the analysis of the data in the study. Descriptive statistics of the sample used in the study and statistical results for the four research questions are presented.

CHAPTER IV

ANALYSIS OF THE DATA

The purpose of this chapter was to present an analysis of the data on academic integration and social integration and persistence of students enrolled in developmental courses at a two-year college in the Southeastern United States. The data were obtained using a pencil and paper survey titled 'A Survey of Academic and Social Integration on Students Enrolled in Remedial Courses in a Two-Year Community College'. Data collection used demographic data, a measure of persistence, and a 34-item survey that measured academic and social integration. The chapter begins with an analysis of the data on the demographic variables and is followed by an analysis in response to each research question.

Demographic Variables

Table 3 includes demographic data on the participants' gender and race/ethnicity. Frequencies and percentages were determined for female and male students by race/ethnicity.

Table 3.

Frequency and Percentage of Developmental Education Students by Race/Ethnicity

Race/Ethnicity	Female		Male		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
African-American	76	37.07	30	14.63	106	51.70
Asian/Pacific Islander	2	0.98	5	2.44	7	3.42
Caucasian	53	25.85	27	13.17	80	39.02
Native American	0	0	0	0	0	0
Spanish/Hispanic	8	3.90	1	0.49	9	4.39
Other	2	0.98	1	0.49	3	1.47
Total	141	68.78	64	31.22	205	100.00

A majority of the students enrolled in developmental courses were African-American students. Moreover, 37.07% ($n=76$) of the students enrolled in developmental studies were African-American females and 14.63% ($n=30$) were African-American males. The findings showed that 25.85% ($n=53$) of the students enrolled in developmental education were Caucasian females and 13.17% ($n=27$) of the students enrolled in developmental education were Caucasian males. Only 9.28% ($n=19$) of the students enrolled in developmental studies were from all other races.

Table 4 includes demographic data on the participants' gender and program. Frequencies and percentages were determined for female and male students by program area.

Table 4.

Frequency and Percentage of Developmental Education Students by Program

Program	Female		Male		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Arts and Sciences	27	13.24	19	9.31	46	22.55
Automotive Technology	1	0.49	6	2.94	7	3.43
Business & Public Service	36	17.65	12	5.88	48	23.53
Engineering Technology	0	0	10	4.90	10	4.90
Health Sciences & Nursing	70	34.31	8	3.92	78	38.23
Industrial Technology	1	0.49	4	1.96	5	2.45
Technical Business	6	2.94	4	1.96	10	4.90
Total	141	69.12	63	30.87	204	99.99

The highest enrollment programs that students enrolled in developmental courses were the health sciences and nursing program. Moreover, 34.31% ($n=70$) female students were enrolled in the health sciences and nursing programs and 3.92% ($n=8$) male students were enrolled in the health sciences and nursing programs. The second highest enrollment programs that students enrolled in developmental courses were business and public service programs. The findings showed that 17.65% ($n=36$) female students were enrolled in the business and public services programs, and 5.88% ($n=12$) male students were enrolled in the business and public services programs. The third highest enrollment program was arts and sciences (22.55%, $n=46$). Arts and sciences was the most popular program for male students (9.31%, $n=19$). Additionally, 13.24% ($n=27$) female

students were enrolled in arts and sciences. Therefore, most students in developmental studies were enrolled in the programs of health sciences and nursing, business and public service, and arts and sciences.

Table 5 includes demographic data on the participants' gender and the number of remedial courses taken. Frequencies and percentages were determined for female and male students by the number of remedial courses taken.

Table 5.

Frequency and Percentage of Developmental Education Students by the Number of Developmental Courses Taken

Number of Developmental Courses Taken	Female		Male		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
1 course	31	15.58	13	6.53	44	22.11
2 courses	40	20.10	28	14.07	68	34.17
3 courses	34	17.09	8	4.02	42	21.11
4 courses	14	7.04	8	4.02	22	11.06
≥5 remedial courses	19	9.55	4	2.01	23	11.56
Total	138	69.35	61	30.65	199	100.00

A majority of all students enrolled in developmental courses had taken between one to three developmental courses. Moreover, 15.58% ($n=31$) female students were enrolled in one developmental course, and 6.53% ($n=13$) male students were enrolled in one developmental course. The findings showed that 20.10% ($n=40$) female students were enrolled in 2 developmental courses, and

14.07% ($n=28$) male students were enrolled in 2 developmental courses.

Additionally, 17.09% ($n=34$) female students were enrolled in 3 developmental courses, and 4.02% ($n=8$) male students were enrolled in 3 developmental courses.

Table 6 includes demographic data on the participants' gender and the grade point averages (GPA). Frequencies and percentages were determined for female and male students by their grade point averages (GPA).

Table 6.

Frequency and Percentage of Developmental Education Students by Their Grade Point Average (GPA)

Grade Point Average	Female		Male		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
A-4.0	9	4.41	5	2.45	14	6.86
B-3.0 – 3.99	51	25.00	15	7.35	66	32.35
C-2.0 – 2.99	37	18.14	27	13.24	64	31.37
D-1.0 – 1.99	2	0.98	0	0	2	0.98
F-below 1.0	0	0	0	0	0	0
Unknown or just started	42	20.59	16	7.84	58	28.43
Total	141	69.12	63	30.88	204	100.00

A majority of the students enrolled in developmental courses that they had a 3.0 – 3.99 grade point average. Moreover, 25.00% ($n=51$) of the female students had a 3.0 – 3.99 grade point average (GPA), and 7.35% ($n=15$) of the male students had a 3.0 – 3.99 GPA. Many students indicated that they had a 2.0 – 2.99 grade point average or they did not know their averages because many

had just started the program. The findings showed 18.14% ($n=37$) of the female students had a 2.0 – 2.99 GPA, and 13.24% ($n=27$) of the male students had a 2.0 – 2.99 GPA. Slightly more than one-fifth (20.59%, $n=42$) of the female students did not know their GPA or they had just started, and 7.84% of the male students.

Dependent Variable

Table 7 provides a display of the mean and standard deviation for the dependent variable used in the study. The dependent variable was persistence. Persistence was defined as the length of time students were enrolled in developmental courses at the institution.

Table 7.

Mean and Standard Deviation – Persistence (length of time students were enrolled in developmental courses at the institution)

	<i>M</i>	<i>SD</i>
Persistence	1.81	0.81

The mean scale score for persistence was 1.81. Thus, students had attended slightly less than two semesters on average.

Analysis of the Research Questions

This section presented the data used in the analysis of the four research questions. The first two questions examined the levels of academic and social integration of students enrolled in developmental courses at a two-year college. The last two questions examined whether there were relationships between the levels of academic integration and persistence, and the levels of social integration and persistence of the students enrolled in developmental courses at a two-year college.

Research Question No. 1

What are the levels of academic integration of students enrolled in developmental courses at a two-year college?

Table 8 provides a display of the means and standard deviations for the variables used in the study to answer the first research question. The variable academic integration included academic and intellectual development and institutional goals and commitments. Participants were given statements regarding their behaviors and attitudes related to academic integration and asked to indicate their agreement or disagreement with the statements using a Likert type scale (1-5 with 1 = strongly agree, 2 = somewhat disagree, 3 = not sure, 4 = somewhat agree, and 5 = strongly agree). An example of the items for academic integration included the following. In addition to required reading assignments, I read many of the recommended books in my courses.

Table 8.

Mean and Standard Deviation – Academic Integration (Academic and Intellectual Development, and Intellectual Goals and Commitments) of Developmental Studies Students

	<i>M</i>	<i>SD</i>
Academic and Institutional Development	3.96	0.70
Institutional Goals and Commitments	4.67	0.49
Academic Integration	4.27	0.52

The mean scale score for academic and intellectual development was 3.96. For institutional goals and commitments, the mean scale score was 4.67, and for overall academic integration, the mean scale score was 4.27. Means were used to establish levels for the subscales academic and institutional development, institutional goals and commitments, and the overall academic integration.

Research Question No. 2

What are the levels of social integration of students enrolled in developmental courses at a two-year college?

Table 9 provides a display of the means and standard deviations for the variables used in the study to answer the second research question. The variable social integration included interactions with faculty, faculty concern for student development and teaching, and peer-group interactions. Participants were given

statements regarding their behaviors and attitudes related to social integration and asked to indicate their agreement or disagreement with the statements using a Likert type scale (1-5 with 1 = strongly agree, 2 = somewhat disagree, 3 = not sure, 4 = somewhat agree, and 5 = strongly agree). An example of the items for social integration included the following: *I am satisfied with my opportunities to meet and interact informally with faculty members.*

Table 9.

Mean and Standard Deviation – Social Integration (Interactions with Faculty, Faculty Concern for Student Development and Teaching, and Peer-group Interactions) of Developmental Studies Students

	<i>M</i>	<i>SD</i>
Interactions with Faculty	3.68	0.90
Faculty Concern for Student Development and Teaching	4.23	0.79
Peer-group Interactions	3.70	0.72
Social Integration	4.04	0.51

The means and standard deviations are shown in the table. The mean scale score for interactions with faculty was 3.68. For faculty concern for student development and teaching, the mean scale score was 4.23 and for peer-group interactions, the mean scale score was 3.70. For overall social integration, the

mean scale was 4.04. Means were used to establish levels for the subscales interactions with faculty, faculty concern for student development and teaching, peer-group interactions, and the overall academic integration.

Research Question No. 3

Do relationships exist between the levels of academic integration and persistence of students enrolled in developmental courses at a two-year college?

Table 10 provides a display of the Pearson correlation for the variables used in the study to answer the third research question. The variable academic integration included academic and intellectual development and institutional goals and commitments. Mean scores were used for the predictor variables academic and intellectual development, institutional goals and commitments, and the overall academic integration. The length of time in semesters was used as the criterion variable.

Table 10.

Correlation Between Academic Integration (Academic and Intellectual Development, and Intellectual Goals and Commitments) and Persistence of Students Enrolled in Developmental Courses at a Two-Year College

	<i>M</i>	<i>SD</i>	Pearson <i>r</i>	Sig. (2-tailed)
Academic and Intellectual Development	3.96	0.70	0.09	0.22
Institutional Goals and Commitments	4.67	0.49	0.09	0.20
Overall Academic Integration	4.27	0.52	0.04	0.60

$p < .05$

The means, standard deviations, Pearson *r*, and p-values are shown in the table. The mean scale score for academic and intellectual development was 3.96. For institutional goals and commitments, the scale score was 4.67, and for overall academic integration, the mean scale score was 4.27. The findings from the study indicated that no significant relationships were found between academic and intellectual development and persistence, institutional goals and commitment and persistence, and overall academic integration and persistence. The Pearson *r* for academic and intellectual development and persistence was 0.09, indicating a very low relationship and no significance. The Pearson *r* for institutional goals and commitment and persistence was also 0.09, indicating a very low

relationship and no significance. The Pearson r for overall academic integration was 0.04 also indicating a low relationship and no significance.

Research Question No. 4

Do relationships exist between the levels of social integration and persistence of students enrolled in developmental courses at a two-year college?

Table 11 provides a display of the Pearson correlation for the variables used in the study to answer the fourth research question. The variable social integration included interactions with faculty, faculty concern for student development and teaching, and peer-group interactions. Mean scores were used for the predictor variables interactions with faculty, faculty concern for student development and teaching, peer-group interactions, and the overall social integration. The length of time in semesters was used as the criterion variable.

Table 11.

Correlation Between Social Integration (Interactions with Faculty, Faculty Concern for Student Development and Teaching, and Peer-group Interactions) and Persistence of Students Enrolled in Developmental Courses at a Two-Year College

	<i>M</i>	<i>SD</i>	Pearson <i>r</i>	Sig. (2-tailed)
Interactions with Faculty	3.68	0.90	0.15	0.03*
Faculty Concern for Student Development and Teaching	4.23	0.79	0.09	0.18
Peer-group Interactions	3.70	0.72	0.03	0.70
Overall Social Integration	4.04	0.51	0.06	0.43

$p < .05$

The means, standard deviations, Pearson *r*, and p-values are shown in the table. The mean scale score for interactions with faculty was 3.68. For faculty concern for student development and teaching, the mean scale score was 4.23, and for peer-group interactions, the mean scale score was 3.70. For overall social integration, the mean score was 4.04. The findings from the study indicated that there was a significant relationship found between interactions with faculty and persistence. No significant relationships were found between faculty concern for student development and teaching and persistence, peer-group interactions and persistence and the overall social integration and persistence. The Pearson *r* for

interactions with faculty and persistence was 0.15, indicating a low relationship with significance ($p=.03$). The Pearson r for faculty concern for student development and teaching and persistence was 0.09, indicating a very low relationship and no significance. The Pearson r for peer-group interactions and persistence was 0.03, indicating a very low relationship and no significance. The Pearson r for overall social integration was 0.06 also indicating a low relationship and no significance.

Summary of the Analysis of Data

The data on academic integration indicated institutional goals and commitments had the highest means for academic integration. The lowest means for academic integration reported by the students enrolled in developmental courses were academic and intellectual development. The data on social integration indicated faculty concern for student development and teaching had the highest means for social integration. Students reported the lowest means for social integration were interactions with faculty. The results of the analysis of data indicated that there was no relationship between the overall level of academic integration and persistence, or between the subscale levels of academic integration (academic and intellectual development, and institutional goals and commitments) and persistence. Moreover, there was no relationship between the

overall level of social integration and persistence, or between the subscale levels of social integration (faculty concern for student development and teaching, and peer-group interactions) and persistence, but there was a low relationship with significance between the subscale level of social integration (interactions with faculty) and persistence.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this chapter was to summarize the results of the study, discuss conclusions that are drawn from the data, provide recommendations for effective retention strategies, and provide recommendations for additional research needs. This study examined academic and social integration and persistence of students enrolled in developmental studies at a two-year college. A survey titled, 'A Survey of Academic and Social Integration on Students Enrolled in Remedial Courses in a Two-Year Community College' was used to collect the data for the study. The study consisted of the following five chapters: (1) Introduction; (2) Review of the Literature; (3) Methodology of the Study; (4) Analysis of the Data; and (5) Summary, Conclusions, and Recommendations.

Chapter I outlined the purpose and rationale for the study including persistence research on two-year college students, research questions, methodology, theoretical framework, conceptual framework, definitions of variables, the significance of the study, and the delimitations.

Chapter II provided a review of the literature relevant to the study including Tinto's *Conceptual Schema for Student Withdrawal*, research on academic integration and social integration, persistence research focused on two-year and

four-year two-year college students, factors related to student persistence, and the five categories that contribute directly to academic and social integration.

Chapter III covered the design and methodology used in the study including a description of the survey research design, participants, survey questions and instrumentation, validity and reliability, demographic and independent and dependent variables, sampling procedures, data collection, research hypotheses, the data source, methods used to analyze the data, and limitations of the study.

Chapter IV presented the data used in the study including an analysis of the research questions, a description of demographic variables with the frequencies and percentages of developmental studies students by gender and race/ethnicity. The data analysis for four research questions and a summary of the analysis of data were also included in chapter IV.

Summary

The purpose of the study was to examine the effects of academic and social integration on two-year college students' persistence in developmental courses. The study examined the levels of academic and social integration of students participating in developmental studies. Additionally, the study

examined the relationships between academic integration and persistence, and social integration and persistence.

Overall Summary

The study found that institutional goals and commitments had the highest means for academic integration. Students reported the lowest means for academic integration were academic and intellectual development. The data on social integration indicated faculty concern for student development and teaching had the highest means for social integration. Students reported the lowest means for social integration were interactions with faculty.

The study indicated that there was little relationship between the overall levels of academic integration and persistence, or between the subscale levels of academic integration: academic and intellectual development, and institutional goals and commitments, and persistence. Moreover, there was little relationship between the overall levels of social integration and persistence, or between the subscale levels of social integration (faculty concern for student development and teaching, and peer-group interactions) and persistence. However, there was a significant correlation between the subscale levels of social integration (interactions with faculty) and persistence.

Summary of the Research Questions

Research questions one and two calculated academic and social integration levels of students enrolled in developmental courses at a two-year college. Research questions three and four investigated whether a relationship existed between the levels of academic and social integration, and persistence of students in two-year colleges.

The data used in this study were from 'A Survey of Academic and Social Integration on Students Enrolled in Remedial Courses in a Two-Year Community College'. Students were surveyed using paper and pencil. Only students enrolled in developmental studies at a two-year community college in the Southeastern United States were included in the study.

The first two research questions were analyzed by calculating means of academic and social integration levels. Questions 3 and 4 were analyzed using correlation analysis. The five demographic variables were gender, race/ethnicity, the program of study, the number of remedial courses taken, and the grade point average. The two independent variables were academic integration levels derived from two survey categories, and social integration levels derived from three survey categories. The dependent variable was persistence.

Research question one. The first research question established the levels of academic integration of students enrolled in developmental courses at a two-year college. The results for means of academic integration levels are 4.27. The results for the means of academic integration subscale levels are as follows: academic and intellectual development ($M=3.96$), and institutional goals and commitments ($M=4.67$).

Research question two. The first research question established the levels of social integration of students enrolled in developmental courses at a two-year college. The results for means of social integration levels are 4.04. The results for the means of social integration subscale levels are as follows: interactions with faculty ($M=3.68$), faculty concern for student development and teaching ($M=4.23$), and peer-group interactions ($M=3.70$).

Research question three. The third research question examined whether a relationship existed between the levels of academic integration and two-year college students' persistence in developmental courses. The result of the Pearson correlation was 0.04. The results for the Pearson correlations of academic integration subscale levels are as follows: academic and intellectual development ($r=0.09$), and institutional goals and commitments ($r=0.09$). Therefore, there was a very low relationship and no significance between the levels of academic

integration and persistence of students enrolled in developmental courses at a two-year college.

Research question four. The fourth research question examined whether a relationship existed between the levels of social integration and two-year college students' persistence in developmental courses. The result of the Pearson correlation was 0.10. The results of the Pearson correlations of social integration subscale levels are as follows: interactions with faculty ($r=0.15$), faculty concern for student development and teaching ($r=0.09$), and peer-group interactions ($r=0.03$). Therefore, there was a low relationship with significance between the subscale levels of interactions with faculty, and persistence of students enrolled in developmental courses at a two-year college. Also, there was a very low relationship and no significance between overall the levels of social integration, and persistence.

Conclusions

The study supports and extends previous research findings regarding the levels of academic and social integration. The levels of academic integration and social integration results were similar to a previous study by Fries-Britt (1994). The relationship between persistence and the levels of academic and social integration extended research that there was no real significant relationship

between persistence and academic and social integration (Nora, 1987; Robinson, 2003; Sorey & Duggan, 2008). However, there was a slight relationship between the social integration subscale interactions with faculty and persistence. There are reasons why no real significance may have been obtained from the relationship between persistence and the levels of academic and social integration (persistence in semesters may have not been the best measurement for persistence, students may have already withdrawn before the survey was given, and some of the questions may have been confusing for students enrolled in developmental studies due to their reading comprehension level). The following are the conclusions of the study.

Conclusion One

Developmental studies students in two-year colleges highest levels were in institutional goals and commitments under academic integration; whereas, the lowest levels were in academic and intellectual development. The highest levels in social integration were under the subscale faculty concern for student development and teaching, and the lowest levels were under interactions with faculty.

Fries-Britt (1994) found that African American students that participated in a program designed to improve persistence for scholars had academic integration levels that were highest for institutional goals and commitments, and

were lowest for academic and intellectual development. Additionally, Fries-Britt (1994) found that the lowest social integration subscale levels were for interactions with faculty, and the highest social integration levels were for peer-group interactions.

In this study, the levels of academic integration were 4.27. The subscales of the levels of academic integration were as follows: academic and intellectual development ($M=3.96$), and institutional goals and commitments ($M=4.67$). The levels of social integration were 4.04. The subscales of the levels of social integration were as follows: interactions with faculty ($M=3.68$), faculty concern for student development and teaching ($M=4.23$), and peer-group interactions ($M=3.70$). Thus, the academic integration subscale levels lowest and highest levels from Fries-Britt's study agree with this study and the social integration subscale level interactions with faculty was the lowest level in both studies.

Conclusion Two

Developmental studies students in two-year colleges do not appear to exhibit a significant relationship between persistence, and academic and social integration. However, there is a slight relationship between the subscale interactions with faculty, and persistence ($r=0.15$).

Thomas Robinson (2003) found that there was no significant relationship between persistence in higher education (PHE) and academic and social

integration. In another study, Nora (1987) found persistence was neither impacted by academic integration nor social integration. Additionally, traditional aged students showed no relationship between persistence and social integration (Sorey & Duggan, 2008). These studies supported the research that had shown there was no significant relationship between persistence, and academic integration and social integration.

In this study, the Pearson correlation was 0.04 for academic integration and persistence, and the Pearson correlations for the subscales and persistence were as follows: academic and intellectual development ($r=0.09$), and institutional goals and commitments ($r=0.09$). The Pearson correlation was 0.10 for social integration and persistence, and the Pearson correlations for the subscales and persistence were as follows: interactions with faculty ($r=0.15$), faculty concern for student development and teaching ($r=0.09$), and peer-group interactions ($r=0.03$). Therefore, there was no significant relationship shown between persistence and academic integration. However, there was a slight relationship between the social integration subscale (interactions with faculty) and persistence. These findings add support to the previous research studies that found that subscales of social integration did contribute to student persistence in two-year colleges.

General Recommendations

Academic integration and social integration in two-year colleges focus on retention interventions which two-year colleges can use to increase student-faculty interaction, faculty-student interaction, student-student interaction, and student involvement within the college.

This study provided additional support for the importance of academic and social integration levels. Additionally, the study supported the evidence that there is no real relationship between academic integration and social integration and persistence. However, it did support research that there was a slight relationship between the subscale for social integration (interactions with faculty) and persistence. The recommendations listed below are based on having a significant relationship between interactions with faculty and persistence.

Recommendation One

Based upon the results of this study, it is recommended that two-year college faculty members receive professional development on strategies that promote strategies on how to interact with students enrolled in developmental studies courses. New instructors could receive professional development on how to approach developmental studies students during their first year in-services, and veteran instructors could receive professional development during their yearly faculty in-service training. These strategies could promote positive

faculty to student interactions. Terenzini and Pascarella (1977) found that stayers reported more informal contacts with faculty members than leavers. This recommendation should increase positive in-class and non-classroom interactions that should increase intellectual growth, interest in ideas, personal growth, values, attitudes, career goals and aspirations (French & Oakes, 2004; Pascarella & Terenzini, 1980).

Recommendation Two

Students enrolled in developmental studies should be afforded the opportunity to work with faculty mentors. This would assist students enrolled in developmental studies in developing a close, personal relationship with at least one faculty member (French & Oakes, 2004; Pascarella & Terenzini, 1980). Some colleges already mentor students who are transitioning from the two-year college to the four-year college environment. Mentoring is a positive way to promote faculty-student interactions.

Recommendation Three

Faculty members can promote learning communities in-and-out of their classrooms (Hagedorn, Maxwell, Rodriguez, Hocevar, & Fillpot, 2000). Learning communities would assist students enrolled in developmental studies with additional opportunities to meet and interact informally with faculty members and other students (French & Oakes, 2004; Pascarella & Terenzini, 1980). Faculty

members could establish amongst themselves learning communities to share strategies on promoting opportunities on how to increase positive interactions with students. Additionally, learning communities could be established amongst students to assist students in promoting positive student-student interactions.

Recommendations for Further Study

The results of this study support the findings that the levels of academic integration are higher than the levels of social integration. Additionally, this study supports the findings that there are no relationships between persistence, and academic and social integration overall. However, it also supports the findings that that there is a relationship between the subscale for social integration interactions with faculty and persistence. Additional research is suggested including the examination of persistence, and academic and social integration with various subgroups of two-year college developmental studies students and replication of the study with different samples of students.

Recommendation One

Additional analysis of the data in the study for members of various racial/ethnic groups, different demographic variables, and different aged students are needed. Students of color have chosen to enroll in two-year colleges because of the proximity to home, the cost, and the open-access nature of these

colleges (Opp, 2002). In 1996 the U.S. Dept. of Education found that 56% of Hispanics, 51% of American Indians, 42% of African-Americans, and 39% of Asian Americans attended two-year colleges (Chronicle of Higher Education, 2000). The additional research would help two-year colleges identify students of color and other minorities that may need assistance based on their perceptions of persistence, and academic and social integration.

Recommendation Two.

The data collected on this survey should be compared to future data on persistence, and social and academic integration. Also, researchers should develop a consensus on the types of questions that would be included in the Institutional Integration Scale, and develop a universal definition for persistence. These conditions would allow reproducibility of results that are gained from this study and/or subsequent or future studies.

Limitations of the Study

The statistics in this study are estimates derived from a sample of developmental studies students and not from a sample of the whole student of developmental students, or from the entire population of students. Sampling errors occur because surveys are only given to a sample of students. Nonsampling errors can result from students not filling out his or her survey

completely, differences interpreting survey items, students' unwillingness to be truthful and bias arising from an underrepresented population (Deming, 2006).

Only developmental studies students were included in the study. Also, since the survey was given during last half of the spring 2008 the results cannot be generalized to students at different points in time, and will not include students that had already withdrawn during the spring 2008 semester.

Additionally, the results may not apply to four-year colleges or other institutions that do not have developmental studies programs that are regionally accredited.

The study's design and methodology did not include additional analysis to control for other plausible causal factors or for student variables; such as, background expenses, educational experiences, or motivational factors.

Additionally, surveys were not given to students that had already withdrawn during the spring 2008 semester.

Appendices

Appendix A

Survey Questions

A Survey of Academic and Social Integration on Students Enrolled in Remedial Courses in a Two-Year Community College

Part I: Demographic Information

1. What is your gender?
 - a. Female
 - b. Male

2. What is your race/ethnicity? (You can mark only one blank.)
 - a. African-American
 - b. Asian/Pacific Islander
 - c. Caucasian
 - d. Native American
 - e. Spanish/Hispanic
 - f. Other _____

3. Which department is your program of study in?
 - a. Arts and Sciences
 - b. Automotive Technology
 - c. Business and Public Service
 - d. Engineering Technology
 - e. Health Sciences and Nursing
 - f. Industrial Technology
 - g. Technical Business

4. How many remedial course(s) have you taken?
 - a. 1 remedial course
 - b. 2 remedial courses
 - c. 3 remedial courses
 - d. 4 remedial courses
 - e. 5 or more remedial courses

5. What is your approximate Grade Point Average (GPA) in College?
 - a. A – 4.0
 - b. B – 3.0
 - c. C – 2.0
 - d. D – 1.0
 - e. F – below 1.0
 - f. Unknown or just started college

6. How long have you been attending this college? (Persistence)
 - a. One semester
 - b. Two semesters
 - c. Three semesters
 - d. Four semesters
 - e. Five semesters or more

Part II: Institutional Integration Scale (Based on Dr. Brian French's Institutional Integration Scale)

Student Experiences

Following is a list of statements characterizing various aspects of academic and social life at this community college. Using the scale to the right of the statements, please indicate the extent of your agreement or disagreement with each statement, as it applies to your experience during the past few months by checking the appropriate box under the appropriate number. Please check **ONLY ONE** box for each statement.

	Strongly Agree	Somewhat Agree	Not sure	Somewhat Disagree	Strongly Disagree
So far at this Community College:					
Peer-Group Interactions	5	4	3	2	1
My interpersonal relationships with students have positively influenced my intellectual growth and interest in ideas.					
I have developed close personal relationships with other students.					
The student friendships I have developed have been personally satisfying.					
My personal relationships with other students have positively influenced my personal growth, values, and attitudes.					
It has been easy for me to meet and make friends with students.					
I am satisfied with my dating relationships.					
Many students I know would be willing to listen and help me if I had a personal problem					
Most students at this Community College have values and attitudes similar to mine					
I am satisfied with the opportunities to participate in organized extracurricular activities at this Community College.					
I am happy with my living/residence arrangement.					
Academic and Intellectual Development	5	4	3	2	1
Most of my courses have been intellectually stimulating.					
I am satisfied with my academic experience at this Community College.					
I am more likely to attend a cultural event (e.g., a concert, lecture, or art show) now compared to a few months ago.					
I am satisfied with the extent of my intellectual development.					
In addition to required reading assignments, I read many of the recommended books in my courses.					
My interest in ideas and intellectual matters has increased since starting classes.					
This year my academic experience has positively influenced my intellectual growth and interest in ideas.					
I have performed academically as well as I anticipated.					
Institutional Goals and Commitments	5	4	3	2	1
Getting good grades is important to me.					
I have an idea about what I want to major in.					
It is important for me to graduate from college.					
It is important for me to graduate from this Community College.					
I am confident that I made the right decision in choosing to attend this Community College.					
I will most likely register at this Community College next fall.					

	Strongly Agree	Somewhat Agree	Not sure	Somewhat Disagree	Strongly Disagree
Interactions With Faculty	5	4	3	2	1
I am satisfied with my opportunities to meet and interact informally with faculty members.					
I have developed a close, personal relationship with at least one faculty member.					
My non-classroom interactions with faculty members have positively influenced my intellectual growth and interest in ideas.					
My non-classroom interactions with faculty members have positively influenced my personal growth, values, and attitudes.					
My non-classroom interactions with faculty members have positively influenced my career goals and aspirations.					
Faculty Concern for Student Development and Teaching	5	4	3	2	1
Many faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students.					
Many faculty members I have had contact with are genuinely outstanding or superior teachers.					
Many faculty members I have had contact with are genuinely interested in students.					
Many faculty members I have had contact with are genuinely interested in teaching.					
Many faculty members I have had contact with are interested in helping students grow in more than just academic areas.					

Appendix B

Student Research Letter

Information Concerning Participation in a Research Study Clemson University

The Effects of Social and Academic Integration on Persistence of Students Enrolled in Developmental Courses at a South Carolina Technical College

Description of the research and your participation

You are invited to participate in a research study conducted by Mark Taylor, a doctoral student at Clemson University. The study will be supervised by Dr. Frankie Keels Williams, his dissertation chair. The purpose of this study is to investigate the effects of academic and social integration of students enrolled in developmental courses at a two-year community college in the prediction of persistence. A survey, the Institutional Integration Scale (IIS) will be disseminated at Greenville Technical College. This survey will be given only to students enrolled in Developmental Studies courses.

Your participation will involve filling out a paper survey titled: A Survey of Academic and Social Integration on Students Enrolled in Remedial Courses in a Two-Year Community College.

The amount of time required for your participation will be approximately 10 minutes.

Risks and discomforts

There are no known risks associated with this research.

Potential benefits

The results from the study may be used to assist in better programming for students enrolled in developmental studies courses.

Protection of confidentiality

We will do everything we can to protect your privacy. No names will be used when reporting results obtained from this survey. Additionally, your identity will not be revealed in any publication that might result from this study.

Voluntary participation

Your participation in this research study is voluntary. You may choose not to participate and you may withdraw your consent to participate at any time. You will not be penalized in any way should you decide not to participate or to withdraw from this study.

Contact information

If you have any questions or concerns about this study or if any problems arise, please contact Dr. Frankie Keels-Williams at Clemson University at 864.656.1491. If you have any questions or concerns about your rights as a research participant, please contact the Clemson University Office of Research Compliance at 864.656.6460.

Appendix C

Institutional Review Board Application Approval

From: Daniel Harris [mailto:DHARRI2@exchange.clemson.edu]
Sent: Thursday, March 13, 2008 10:13 AM
To: fkw@CLEMSON.EDU
Cc: marktaylor3343@hotmail.com
Subject: Validation of IRB application #IRB2008-092 "The Effects of Social and Academic Integration on Persistence of Students..."

Dr. Williams,

The Chair of the Clemson University Institutional Review Board (IRB) validated the proposal identified above using Exempt review procedures and a determination was made on **March 13, 2008** that the proposed activities involving human participants qualify as Exempt from continuing review under **Category 2** based on the Federal Regulations. You may begin this study.

Please remember that no change in this research proposal can be initiated without prior review by the IRB. Any unanticipated problems involving risks to subjects, complications, and/or any adverse events must be reported to the IRB immediately. The Principal Investigator is also responsible for maintaining all applicable protocol records (regardless of media type) for at least three (3) years after completion of the study (i.e., copy of validated protocol, raw data, amendments, correspondence, and other pertinent documents). You are requested to notify the Office of Research Compliance (ORC) if your study is completed or terminated.

Attached are documents developed by Clemson University regarding the responsibilities of Principal Investigators and Research Team Members. Please be sure these are distributed to all appropriate parties.

Good Luck with your study and please feel free to contact us if you have any questions. Please use the IRB number and title in all communications regarding this study.

Daniel Harris

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Appendix D

Participation Letter from Greenville Technical College

February 18, 2008

Mr. Mark Taylor
8501 Pecan Brook Court
Tampa, FL 33647

RE: Survey of Development Students

Dear Mr. Taylor,
Greenville Technical College is pleased to work with you to conduct a survey of our developmental students for your dissertation. Greenville Technical College will provide access to developmental students for you to survey. Please let me know how I can be of assistance in your research. If you need any additional information, please do not hesitate to call me at (864) 423-7830.

Sincerely,

Joel D. Welch, PE
Greenville Technical College
Associate Vice President for Administration

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